DVD PLAYER

DVD622MKI/37/93/97 & DVD622MKII/37/93

Service
Service
Service

Service Manual

CLASS 1
LASER PRODUCT

DVD VIDEO

COMPACT disc DIGITAL VIDEO

COMPACT disc DIGITAL AUDIO

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DVD622MKII

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Published by KC-TE 0604 AV System | Printed in the Netherlands | Subject to modification | 3139 785 31162

Version 1.2

PHILIPS

Service Hints (FOR DVD622MKI & DVD622MKII)

CAUTION

CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE DRIVE ELECTRONICS WHEN CONNECTING A NEW DRIVE.THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE

- **SWITCH OFF POWER SUPPLY**
- **ESD PROTECTION**

ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

The following steps have to be done when replacing the defective loader :

1. Dismantling of the loader to access the ESD protection point if necessary.
2. **Solder the ESD protection point*.**
3. Disconnect flexfoil cable from the defective loader.
4. Put a paper clip on the flexfoil to short-circuit the contacts (fig.1)
5. Replace the defective loader with a new loader.
6. Remove paperclip from the flexfoil and connect it to the new loader.
7. Remove solder joint on the ESD protection point.

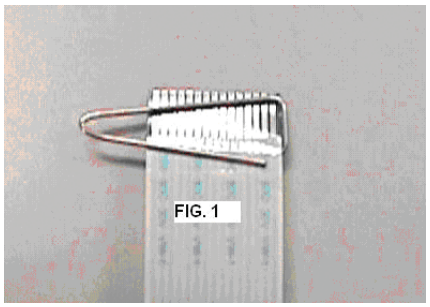
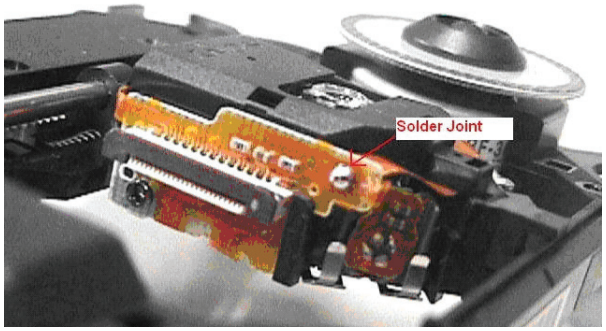


FIG. 1

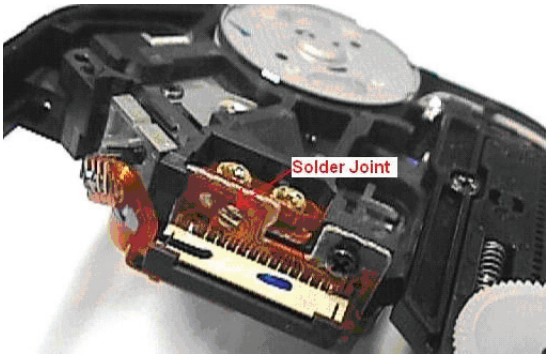
ATTENTION: The laser diode of this loader is protected against ESD by a solder joint which shortcircuits the laserdiode to ground. For proper functionality of the loader this solder joint must be remove **after** connection loader to the set.

Type 1



(ESD protection point is accessible from top of loader)

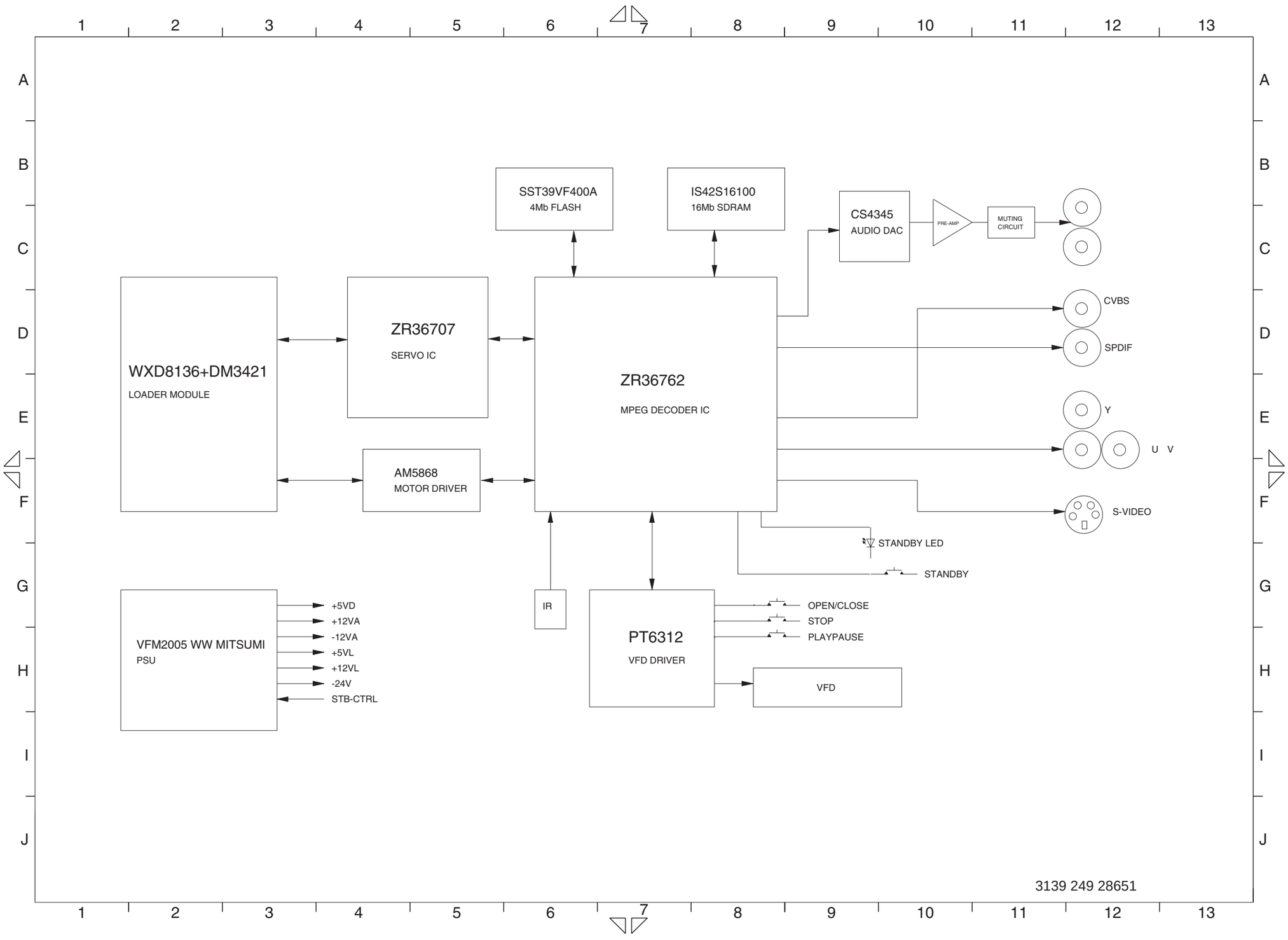
Type 2



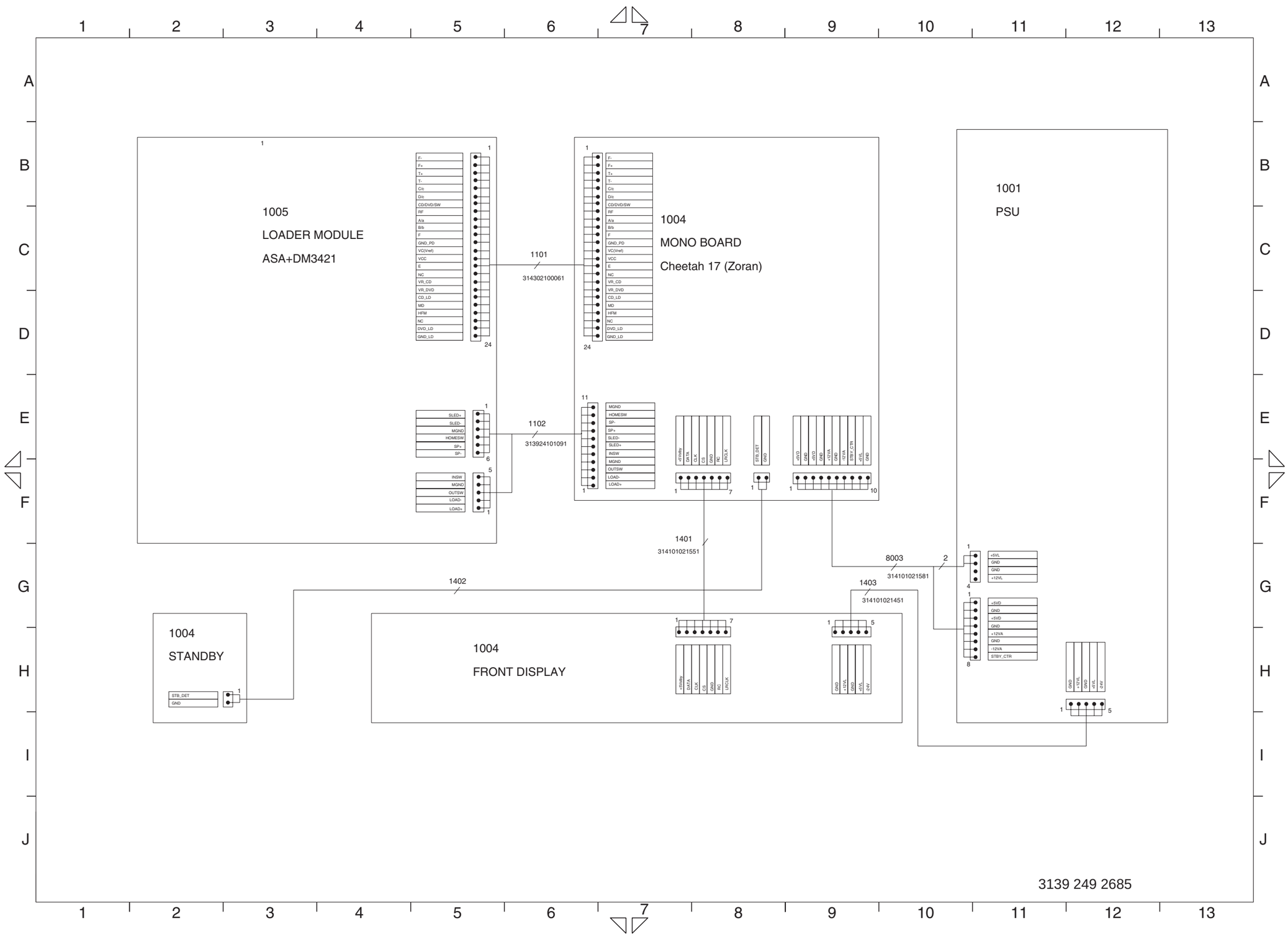
(ESD protection point is accessible from bottom of the loader)

Only applicable for defective loader needed to be sent back to supplier for failure analysis and to support backcharging evidence.
This is also applicable for all partnership workshops.

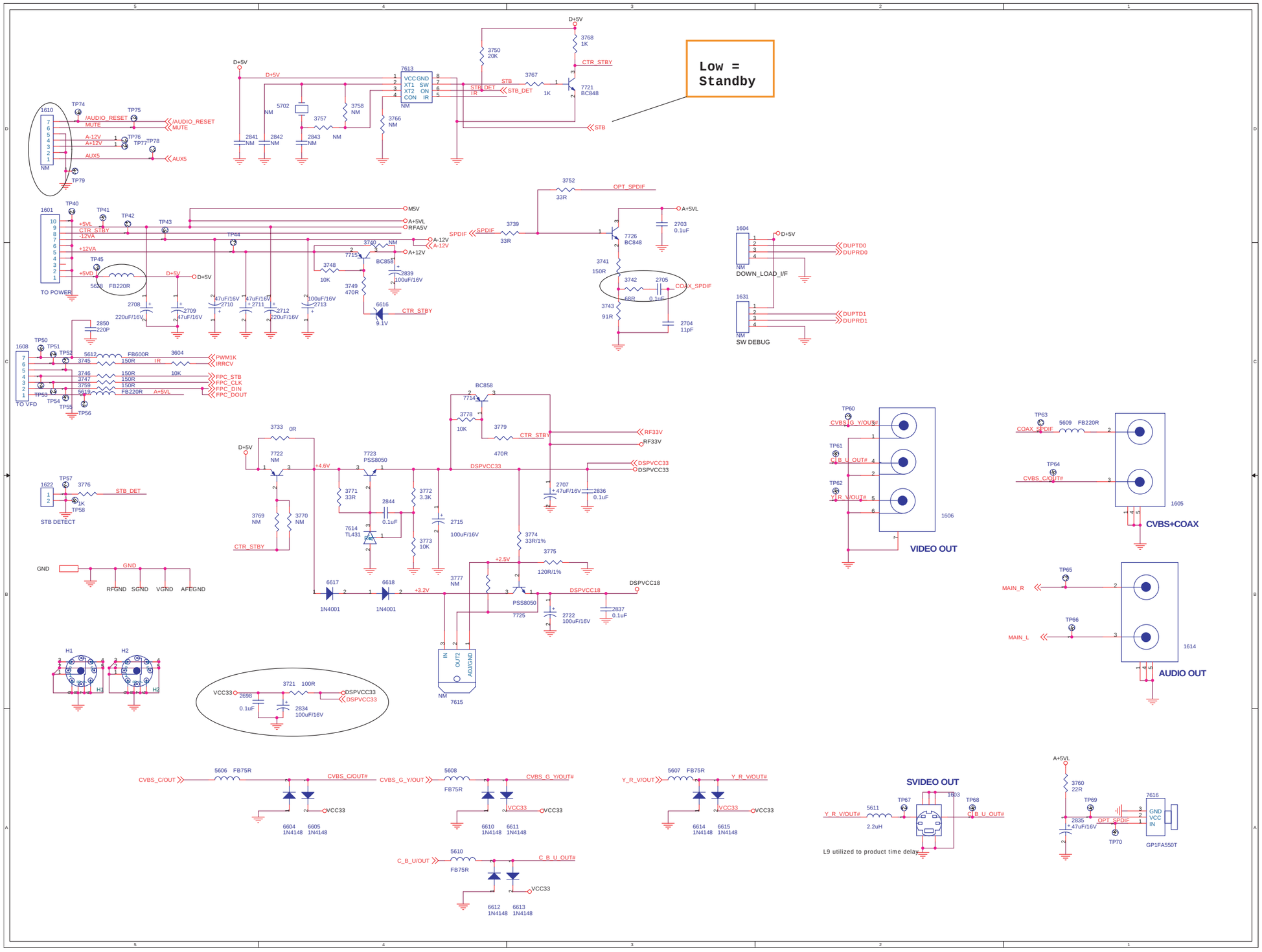
Block Diagram



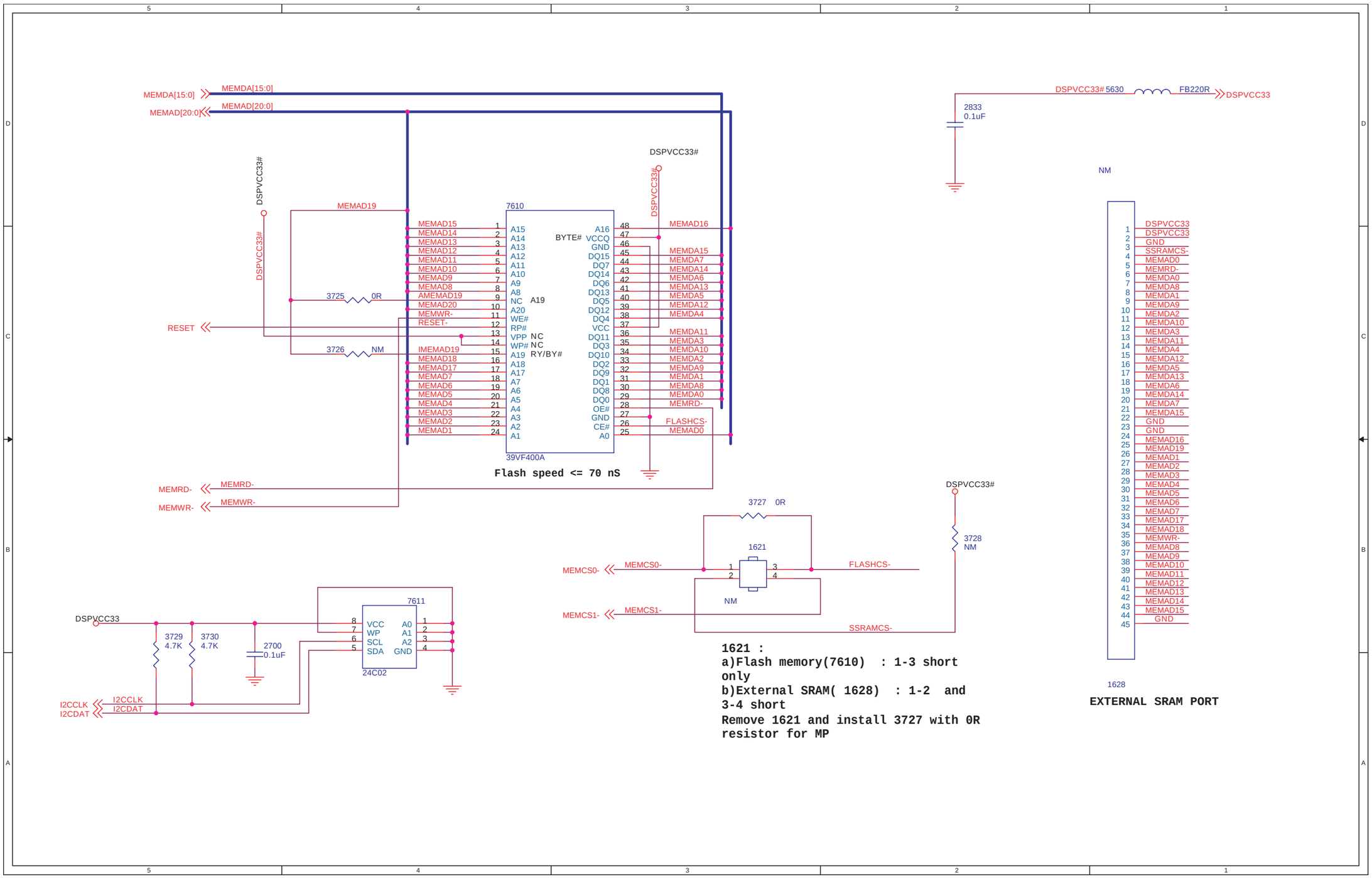
Wiring Diagram



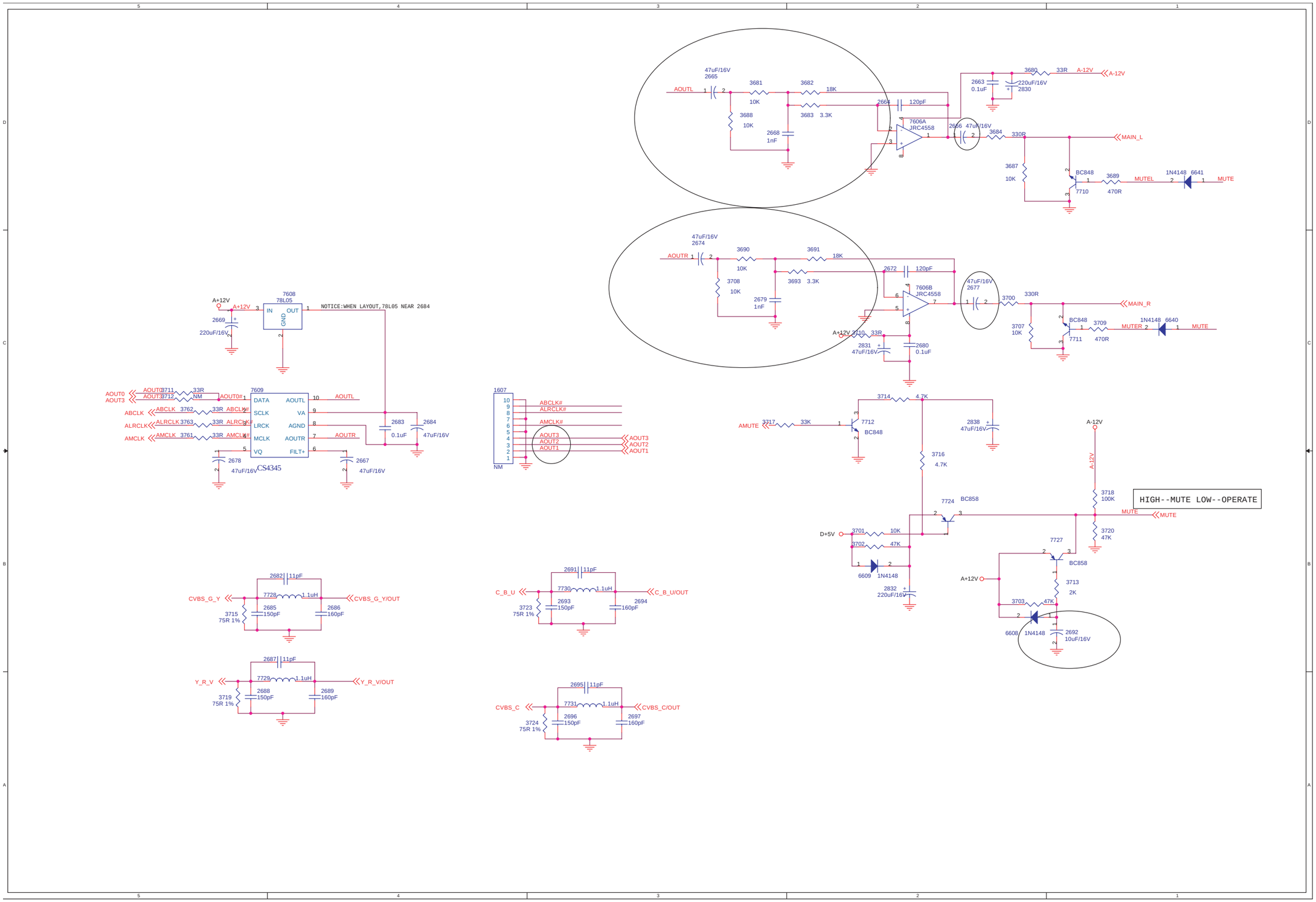
Monoboard Circuit Diagram 1



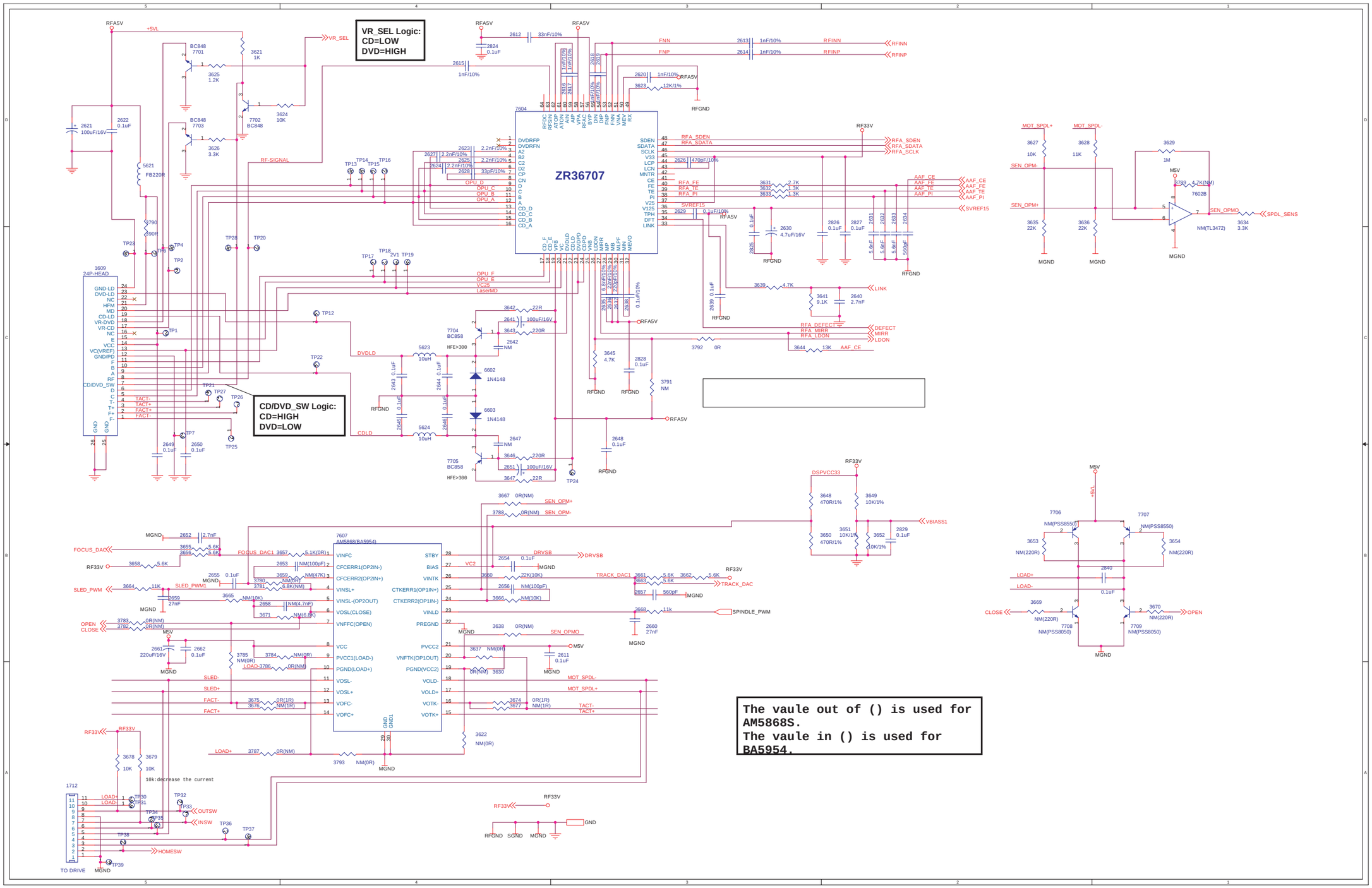
Monoboard Circuit Diagram 2



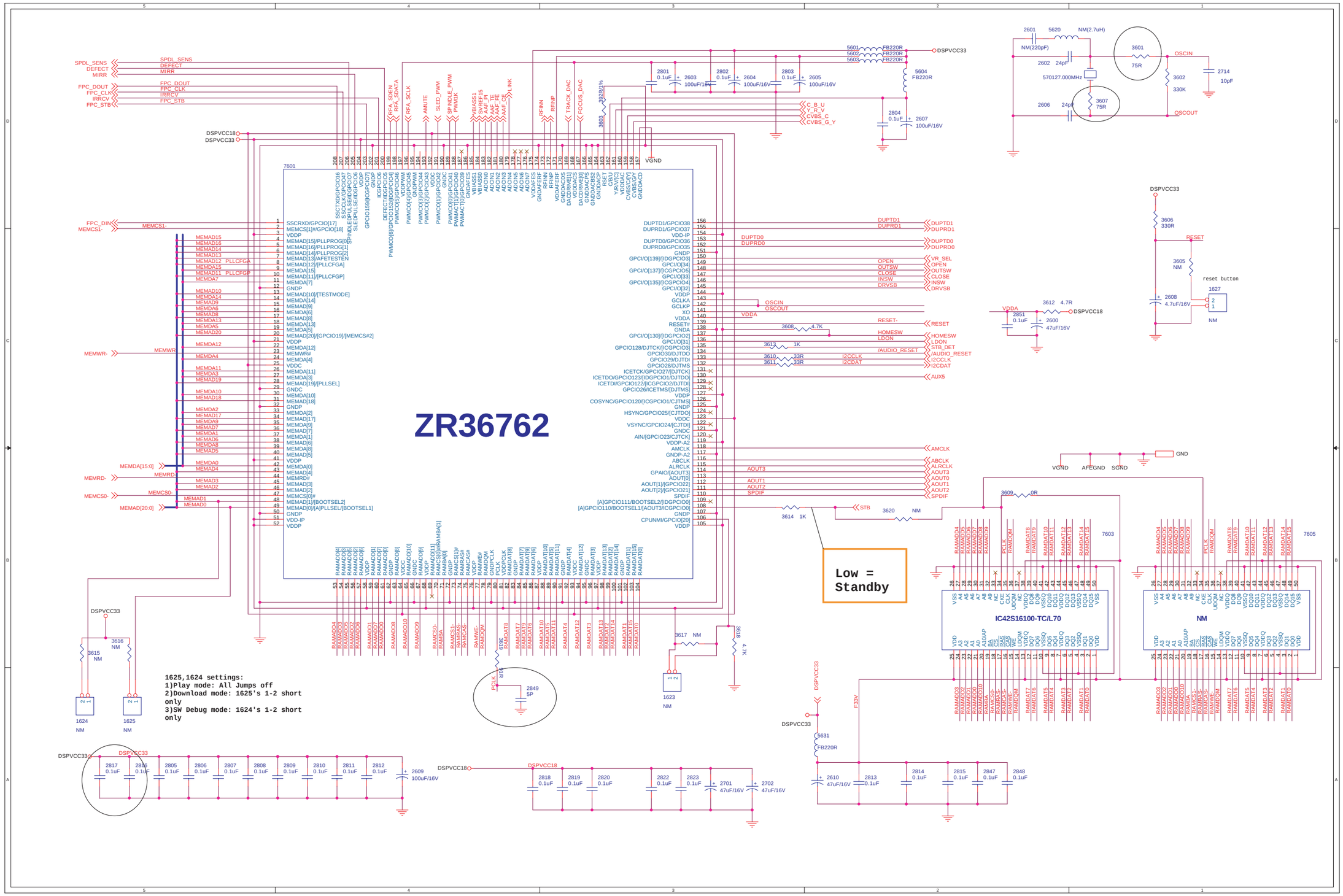
Monoboard Circuit Diagram 3



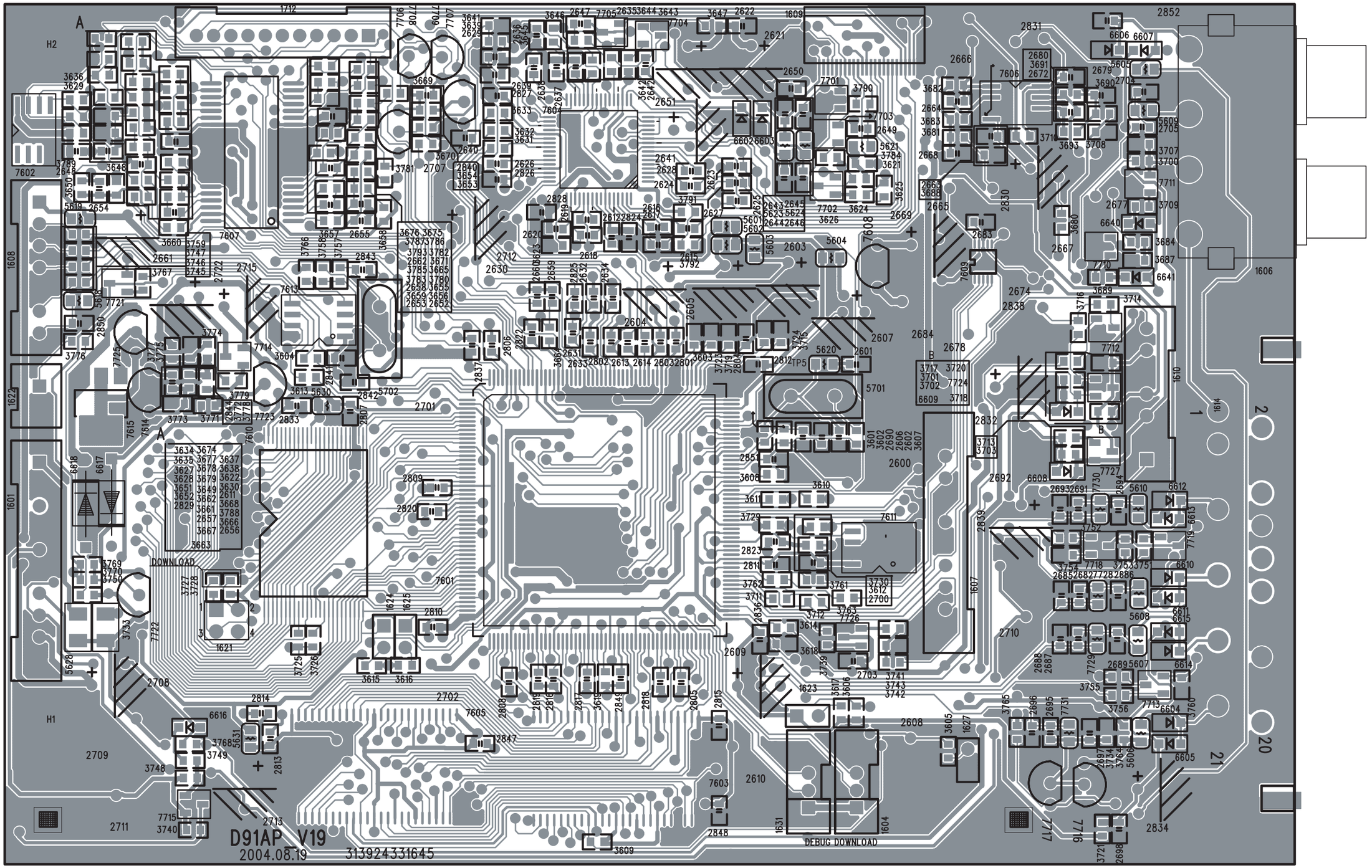
Monoboard Circuit Diagram 4



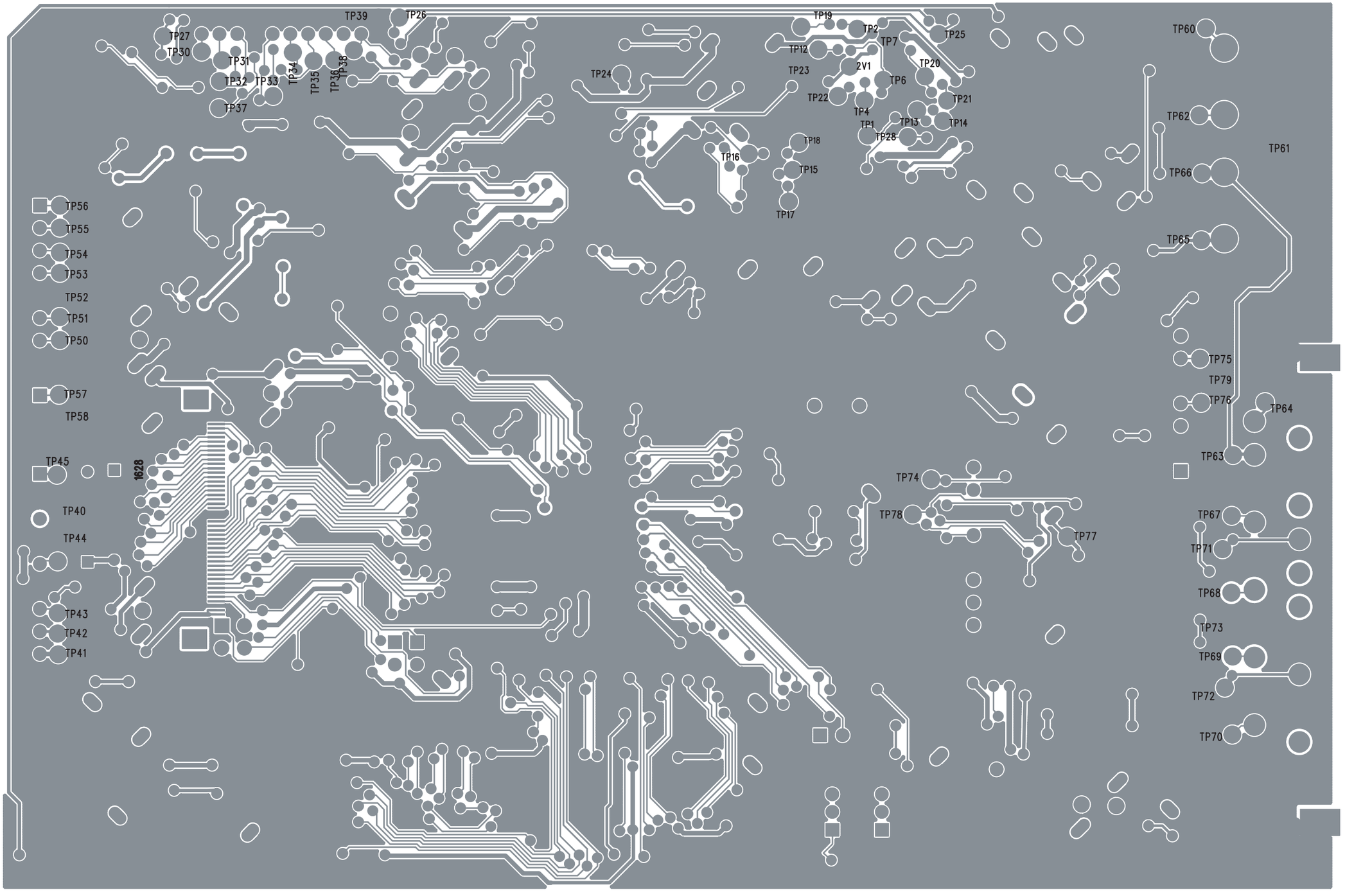
Monoboard Circuit Diagram 5



Monoboard Layout (Top view)

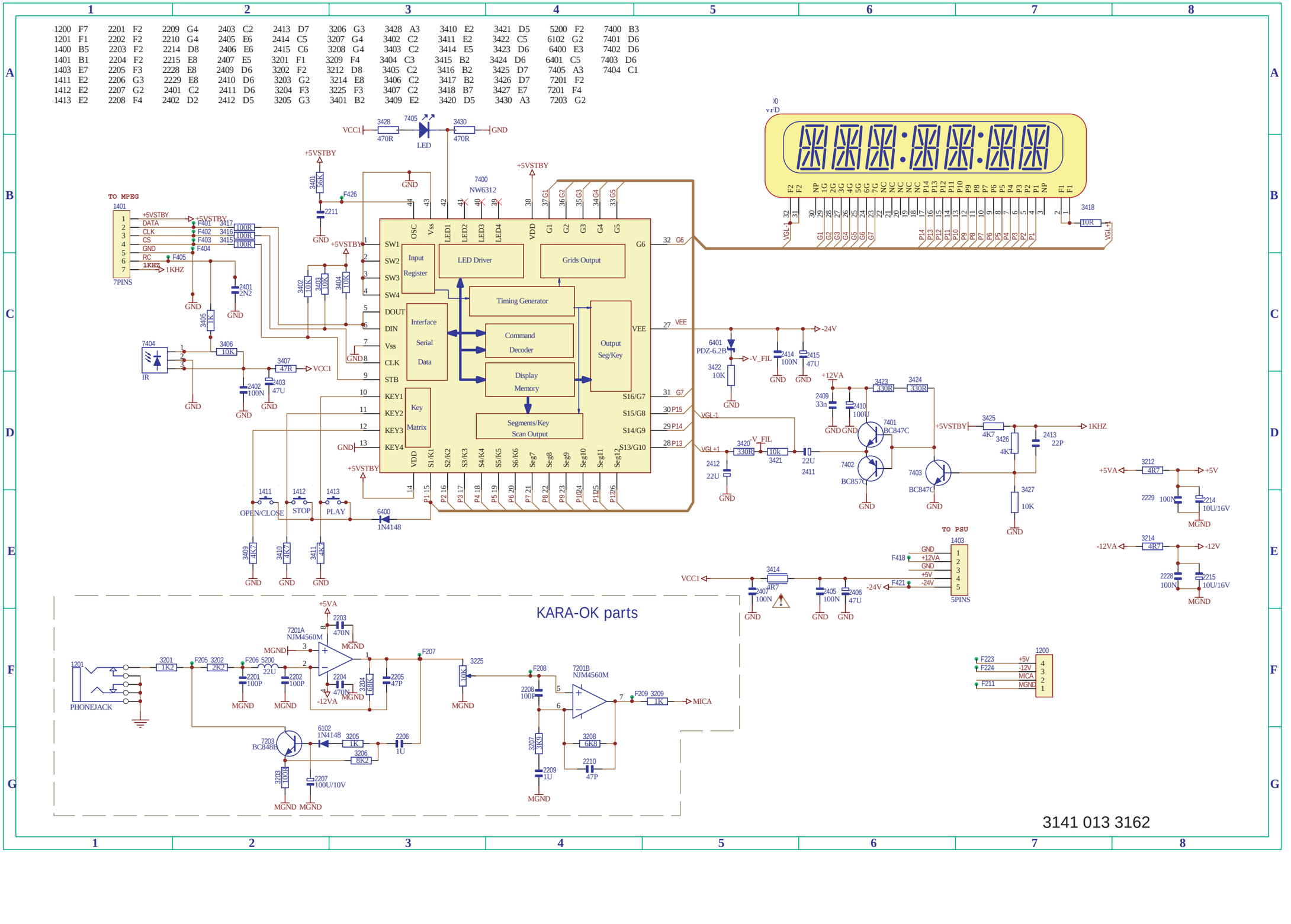


Monoboard Layout (Bottom view)



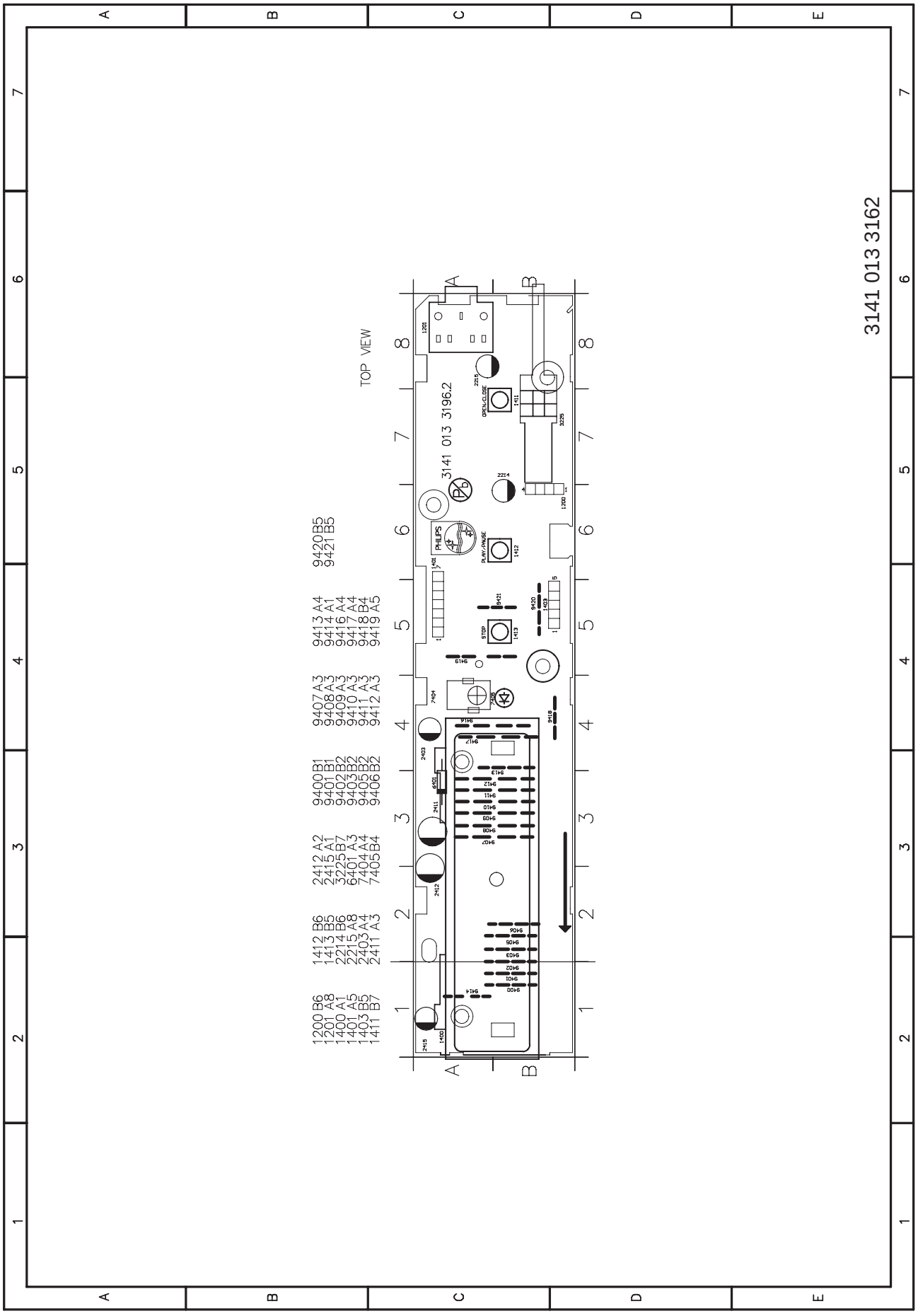
Frontboard Layout Circuit Diagram

1200	F7	2201	F2	2209	G4	2403	C2	2413	D7	3206	G3	3428	A3	3410	E2	3421	D5	5200	F2	7400	B3
1201	F1	2202	F2	2210	G4	2405	E6	2414	C5	3207	G4	3402	C2	3411	E2	3422	C5	6102	G2	7401	D6
1400	B5	2203	F2	2214	D8	2406	E6	2415	C6	3208	G4	3403	C2	3414	E5	3423	D6	6400	E3	7402	D6
1401	B1	2204	F2	2215	E8	2407	E5	3201	F1	3209	F4	3404	C3	3415	B2	3424	D6	6401	C5	7403	D6
1403	E7	2205	F3	2228	E8	2409	D6	3202	F2	3212	D8	3405	C2	3416	B2	3425	D7	7405	A3	7404	C1
1411	E2	2206	G3	2229	E8	2410	D6	3203	G2	3214	E8	3406	C2	3417	B2	3426	D7	7201	F2		
1412	E2	2207	G2	2401	C2	2411	D6	3204	F3	3225	F3	3407	C2	3418	B7	3427	E7	7201	F4		
1413	E2	2208	F4	2402	D2	2412	E5	3205	G3	3401	B2	3409	E2	3420	D5	3430	A3	7203	G2		

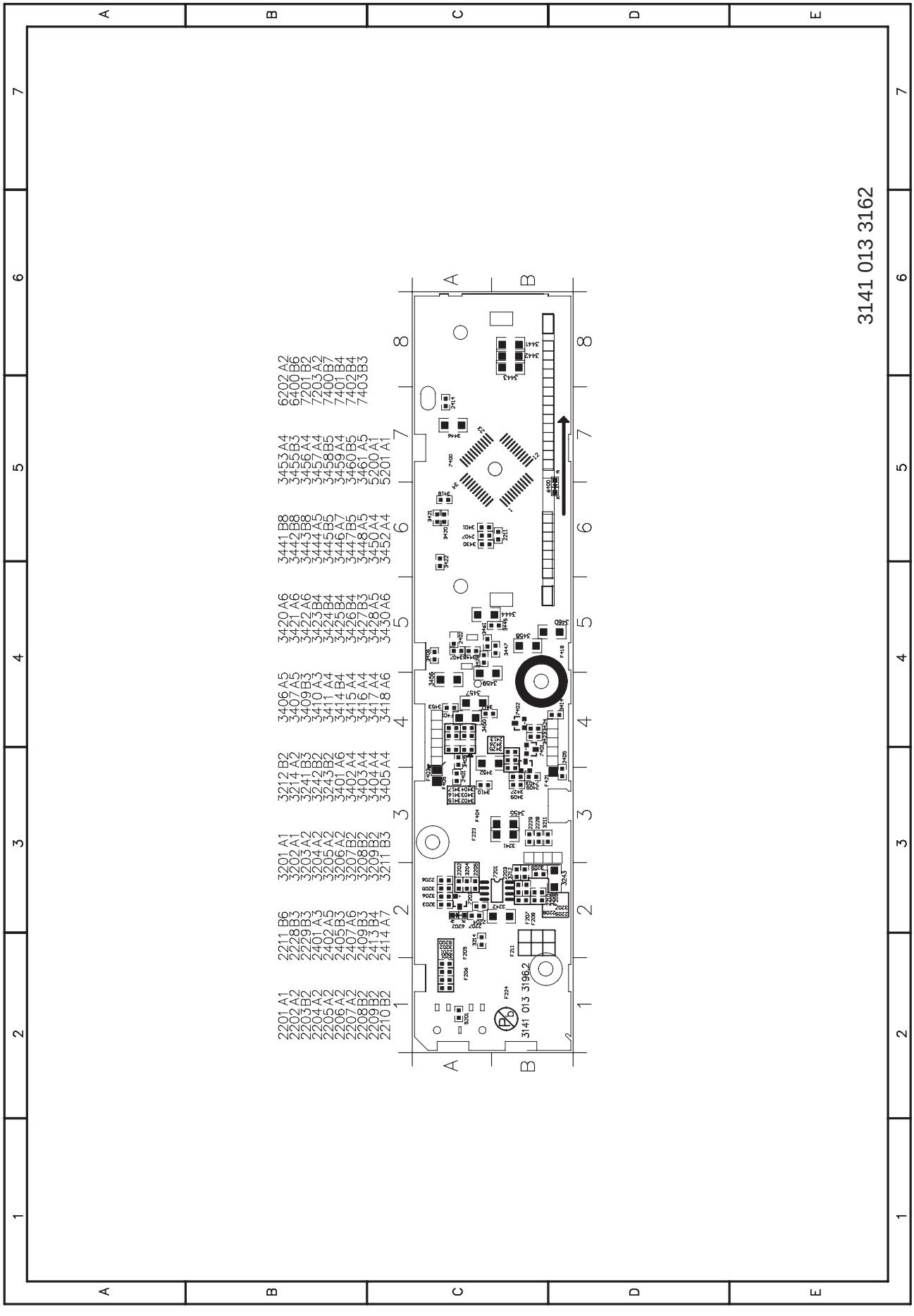


3141 013 3162

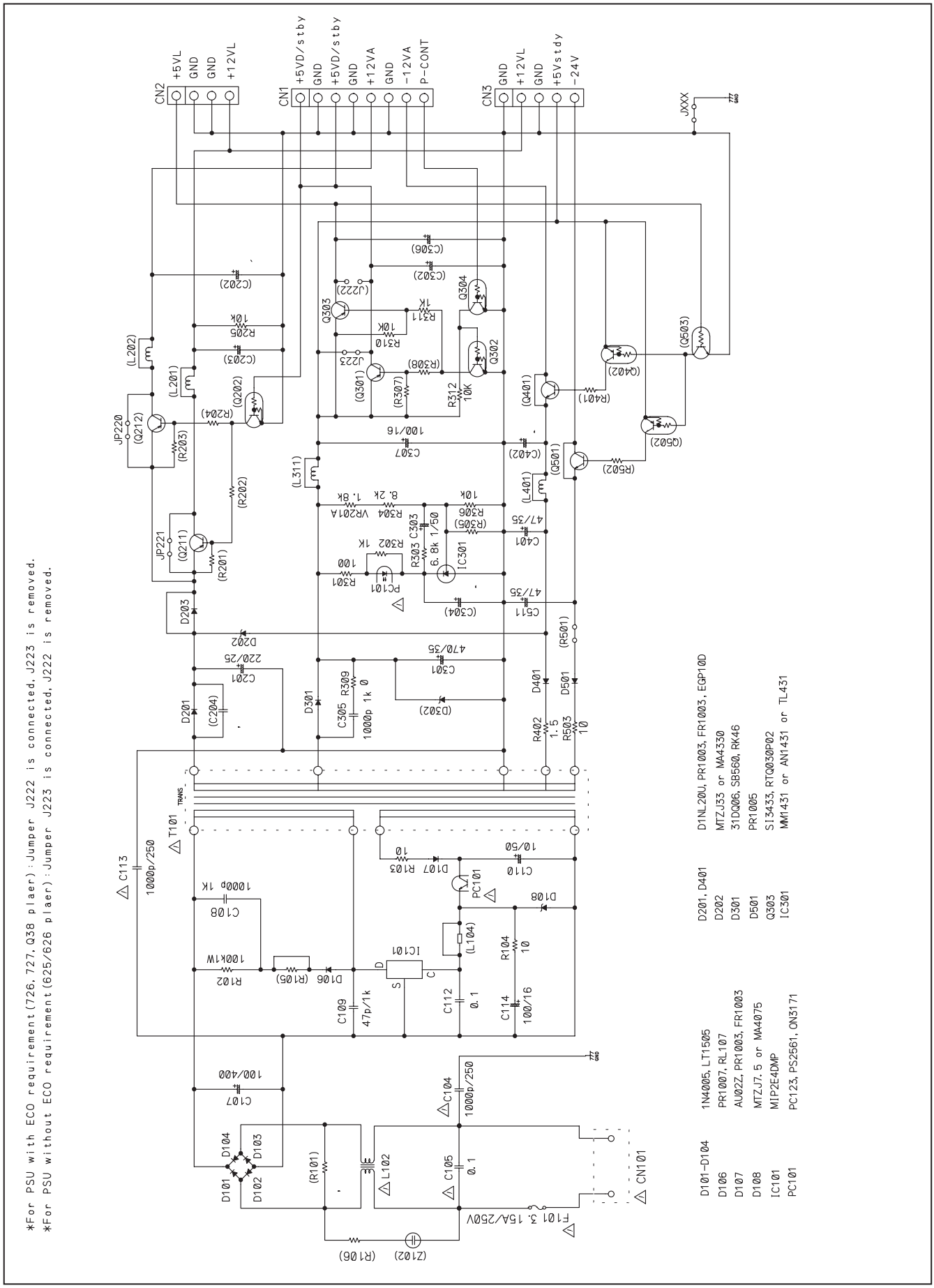
Front Board (Top view)



Front Board (Bottom view)

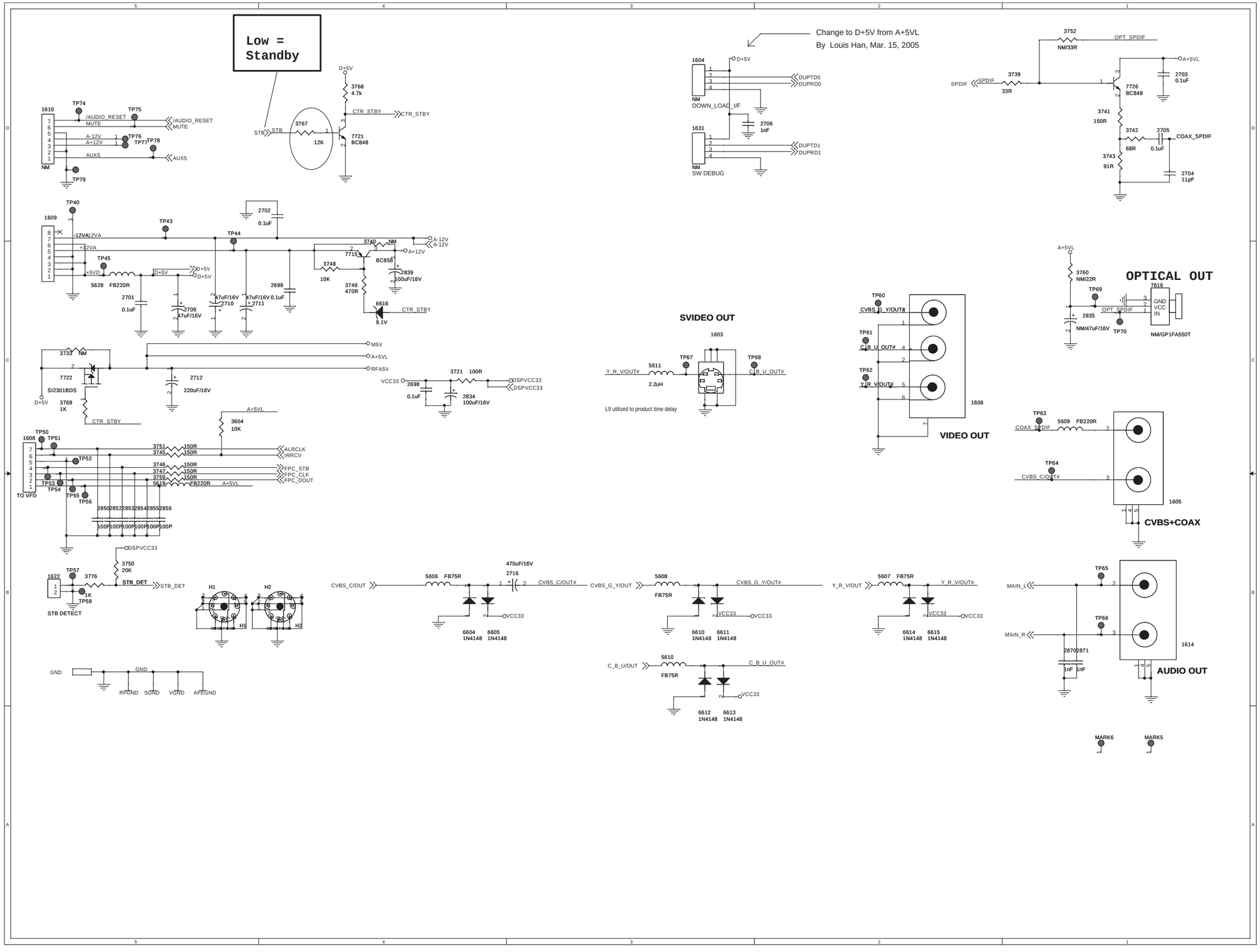


PSU Circuit Diagram (For Information Only)

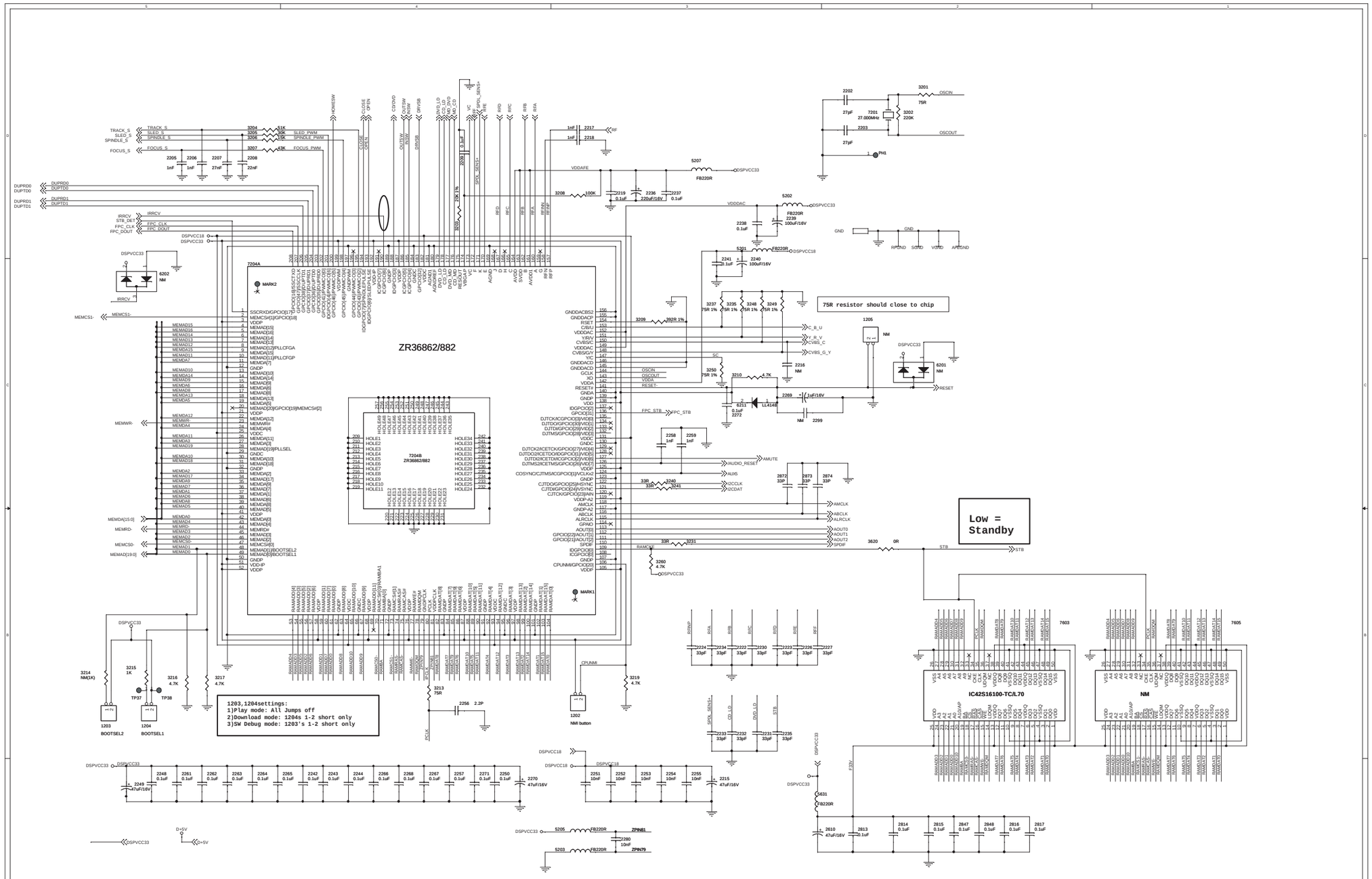

*For PSU with ECO requirement(726, 727, Q38 plaer) : Jumper J222 is connected, J223 is removed.
*For PSU without ECO requirement(625/626 plaer) : Jumper J223 is connected, J222 is removed.
D101-D104 1N4005, LT1505
D106 PR1007, RL107
D107 AU02Z, PR1003, FR1003
D108 MTZJ7.5 or MA4075
IC101 MIP2E4DMP
PC101 PC123, PS2561, CN3171
D201, D401 D1NL20U, PR1003, FR1003, EGP10D
D202 MTZJ33 or MA4330
D301 31DQ06, SB560, RK46
D501 PR1005
Q303 S13433, RTQ030P02
IC301 MM1431 or AN1431 or TL431

Notes:

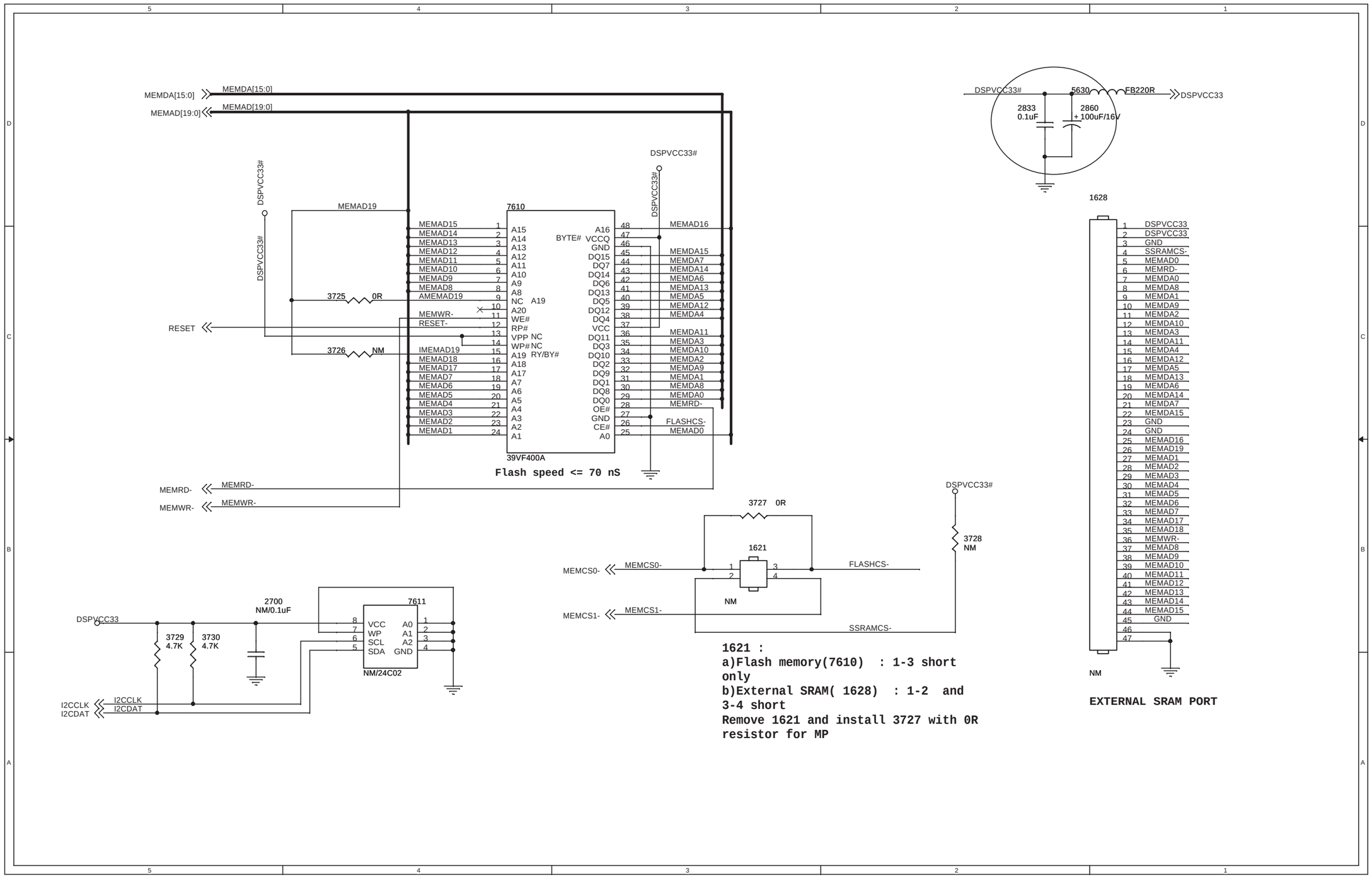
Monoboard Circuit Diagram 1



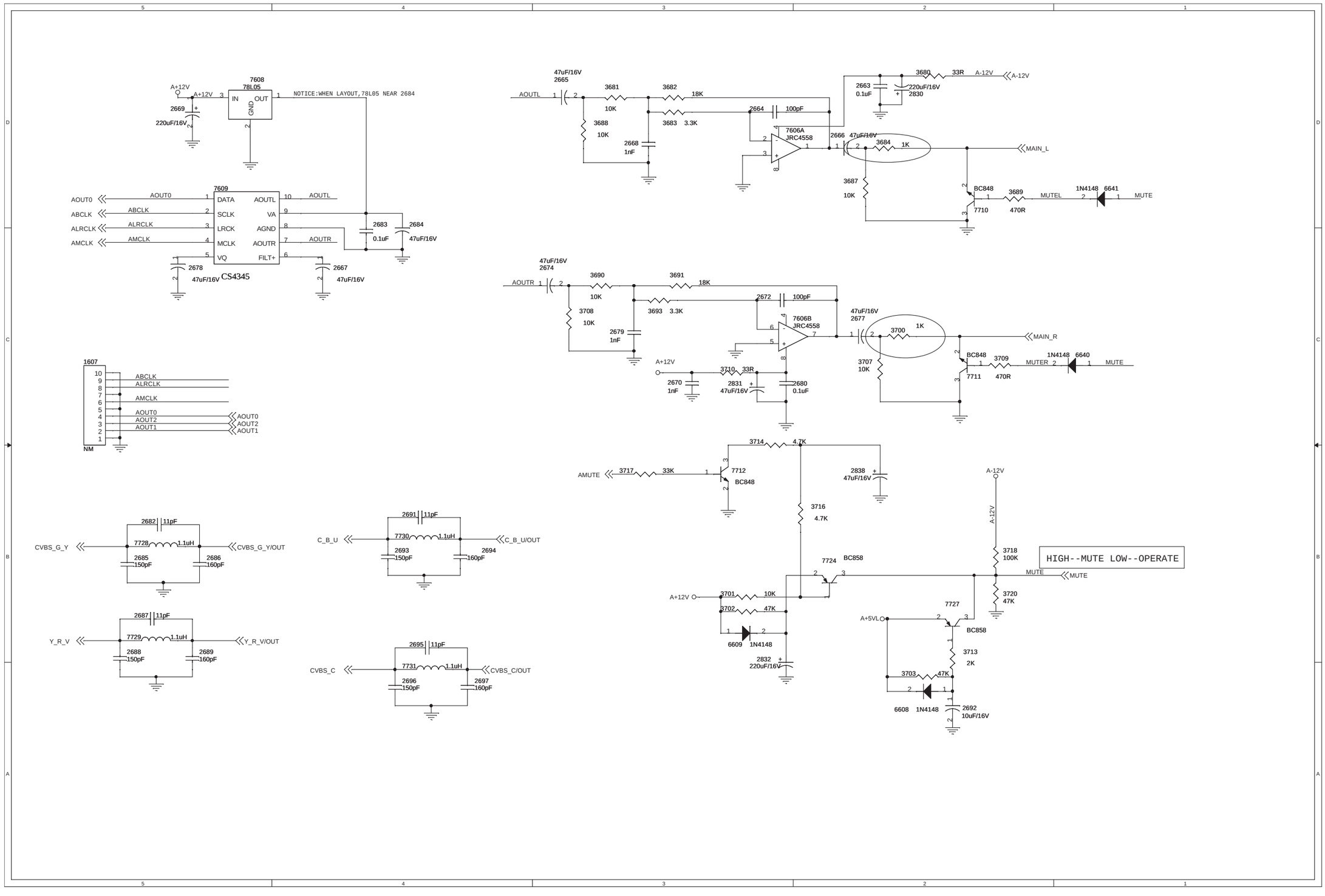
Monoboard Circuit Diagram 2



Monoboard Circuit Diagram 3



Monoboard Circuit Diagram 4



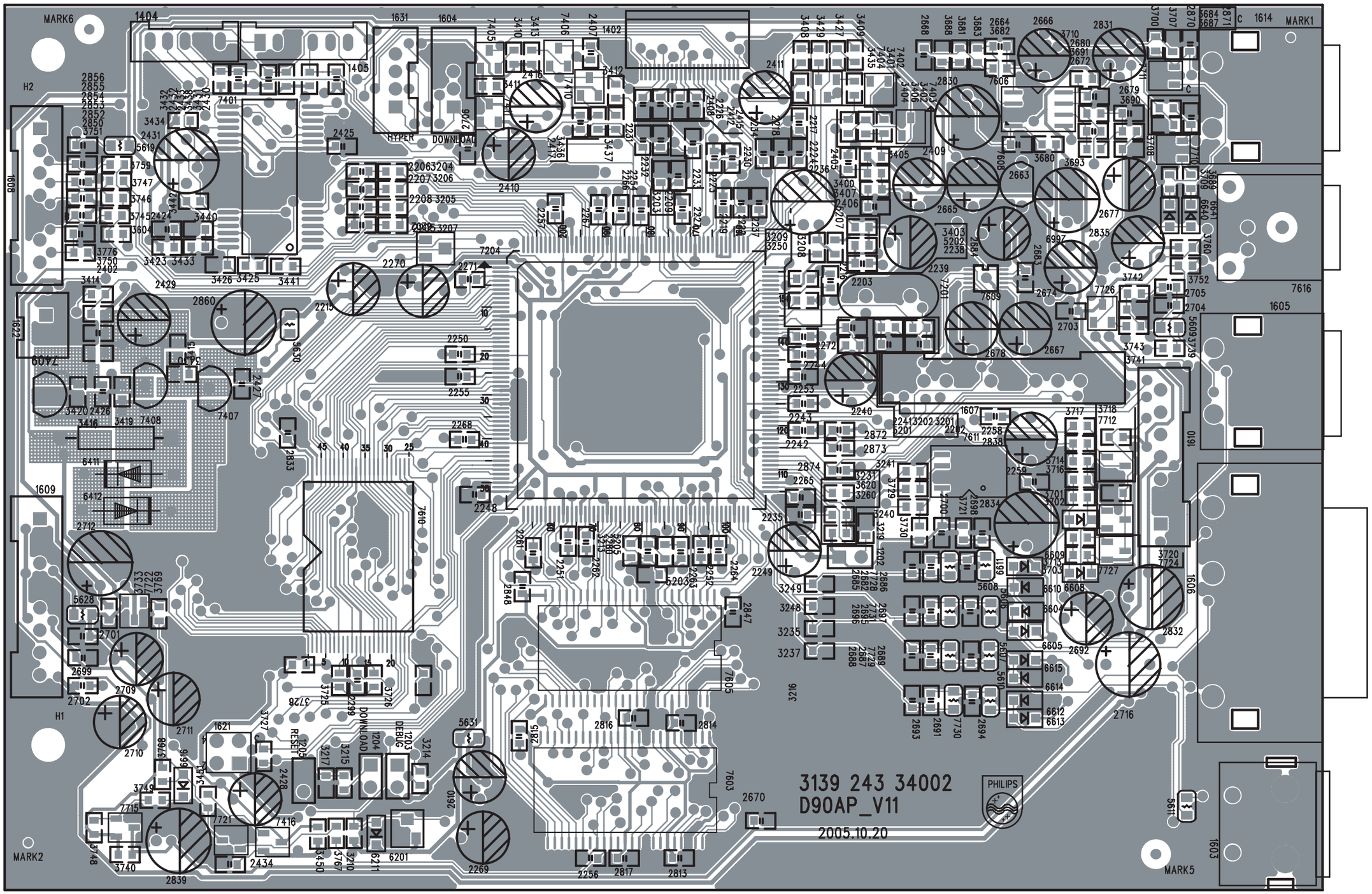
Monoboard Circuit Diagram 5

Sony313

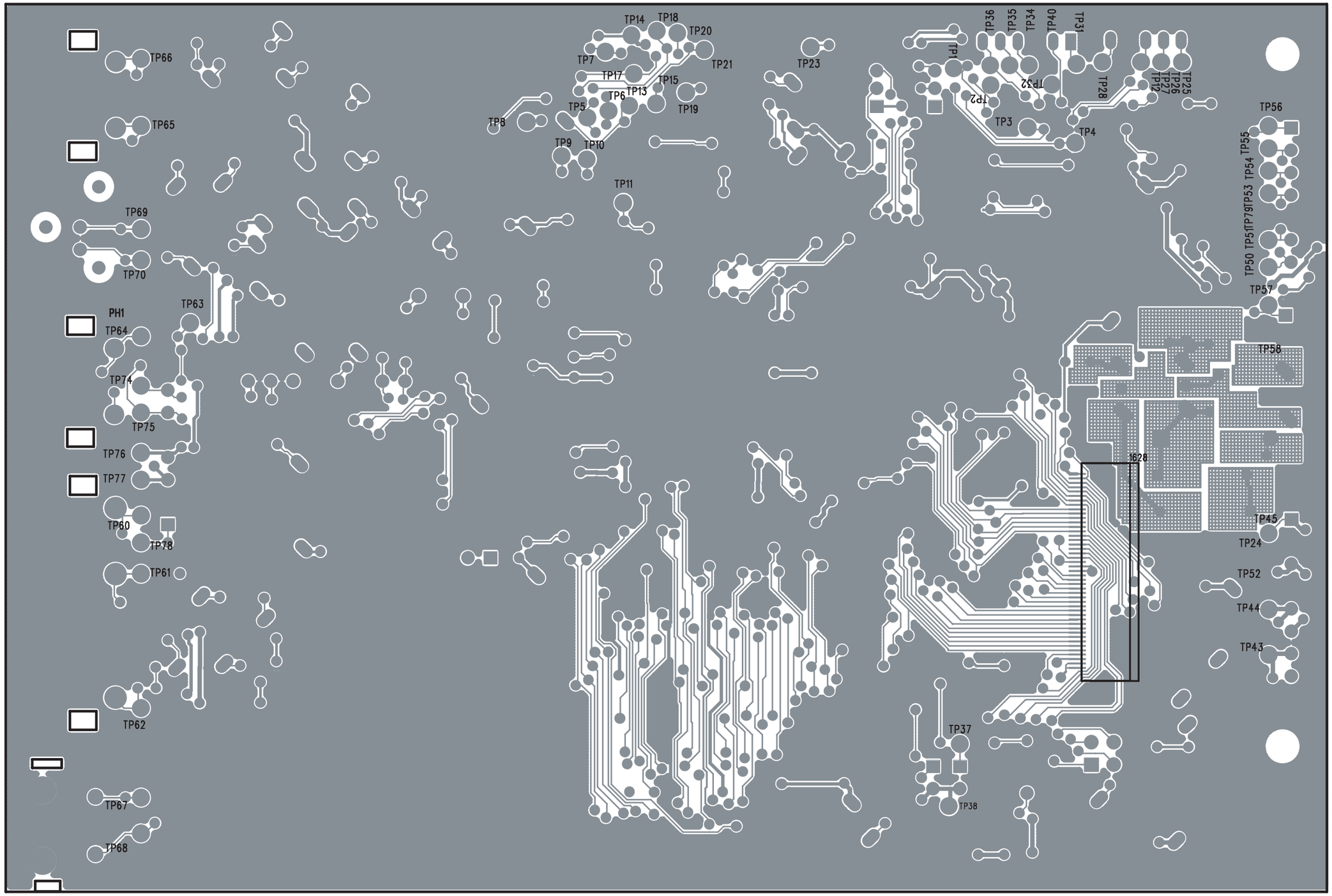
Not assemble in MP model

7706,7707 must have enough large pads for thermal spreading

Monoboard Layout (Top view)

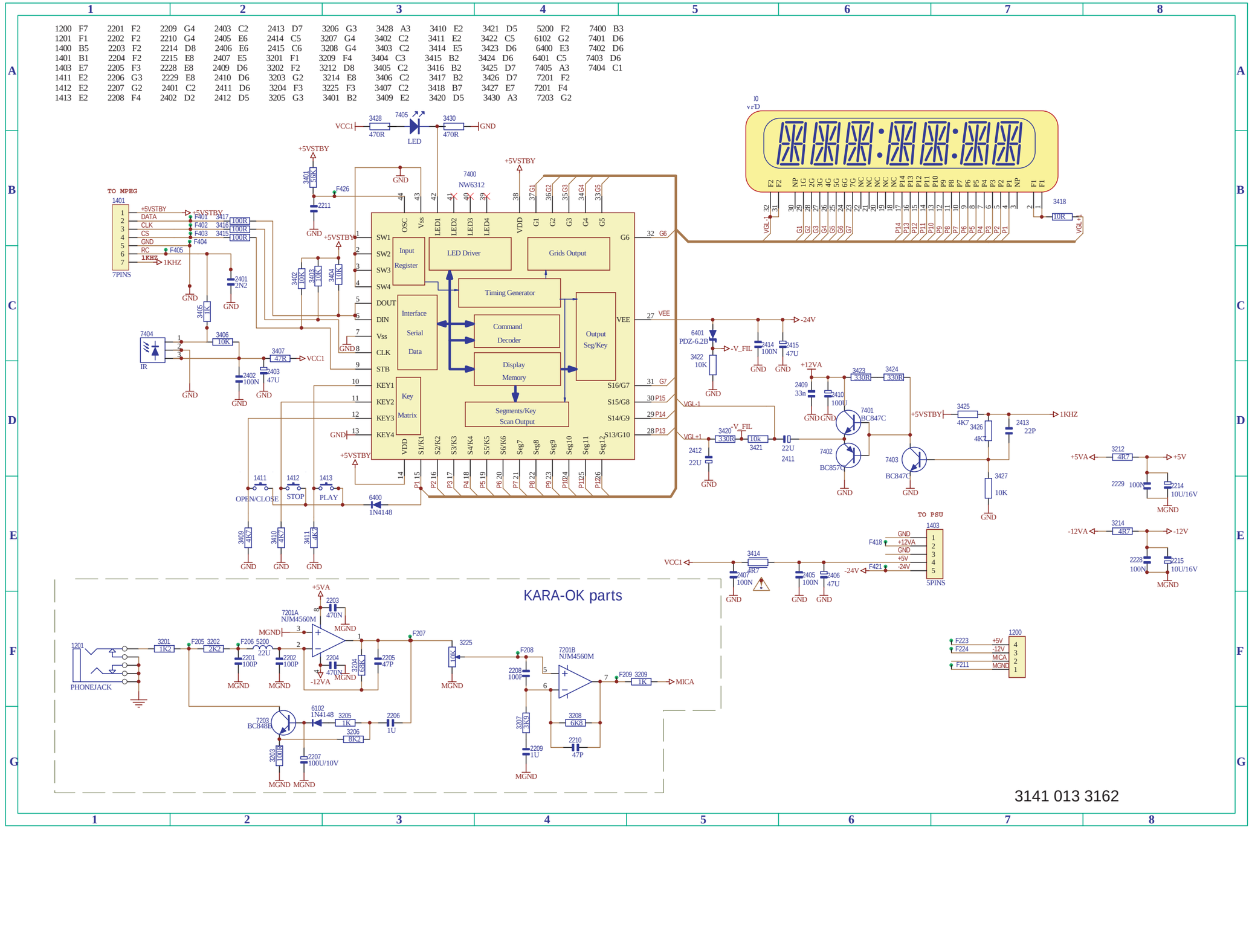


Monoboard Layout (Bottom view)

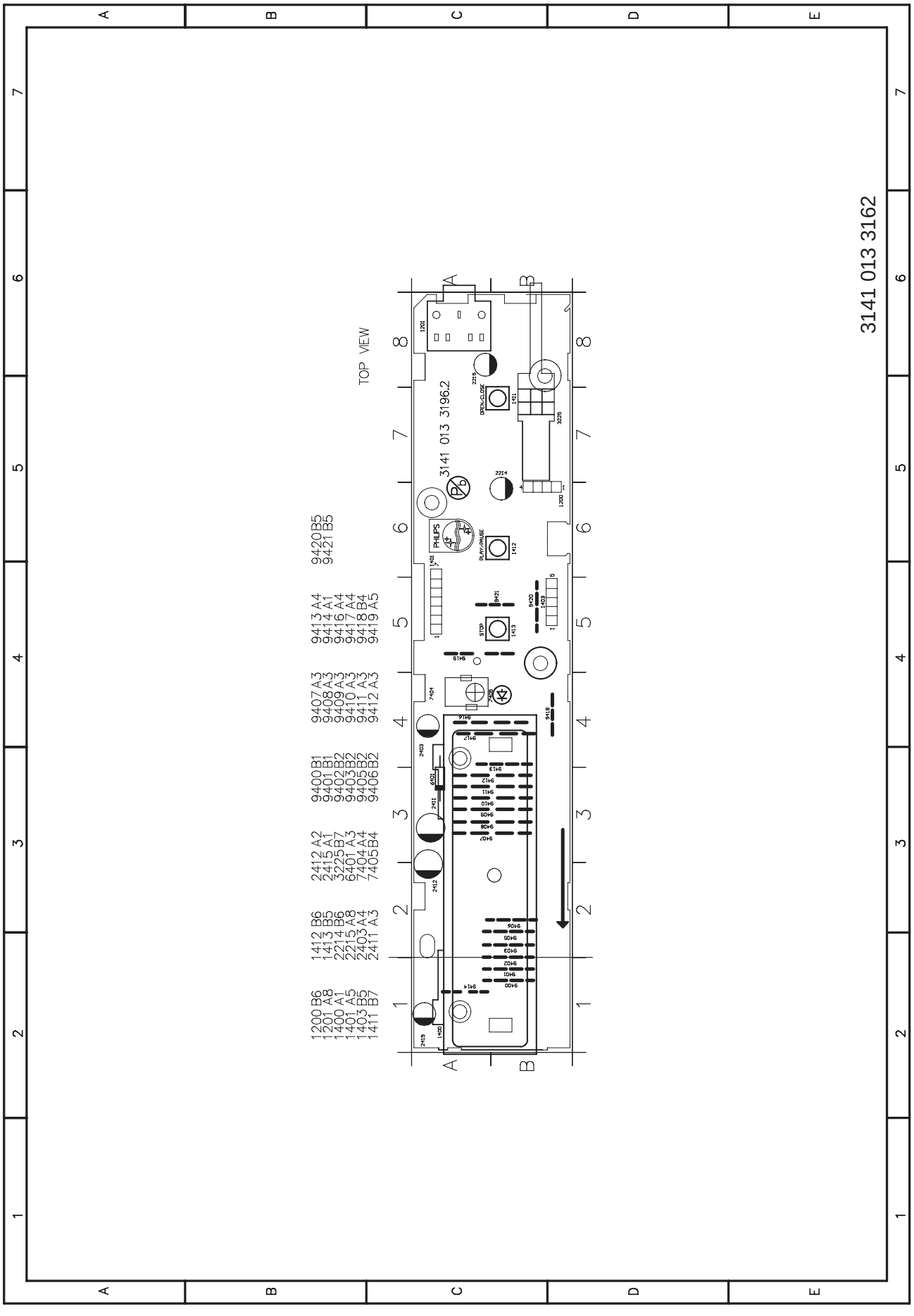


Frontboard Circuit Diagram

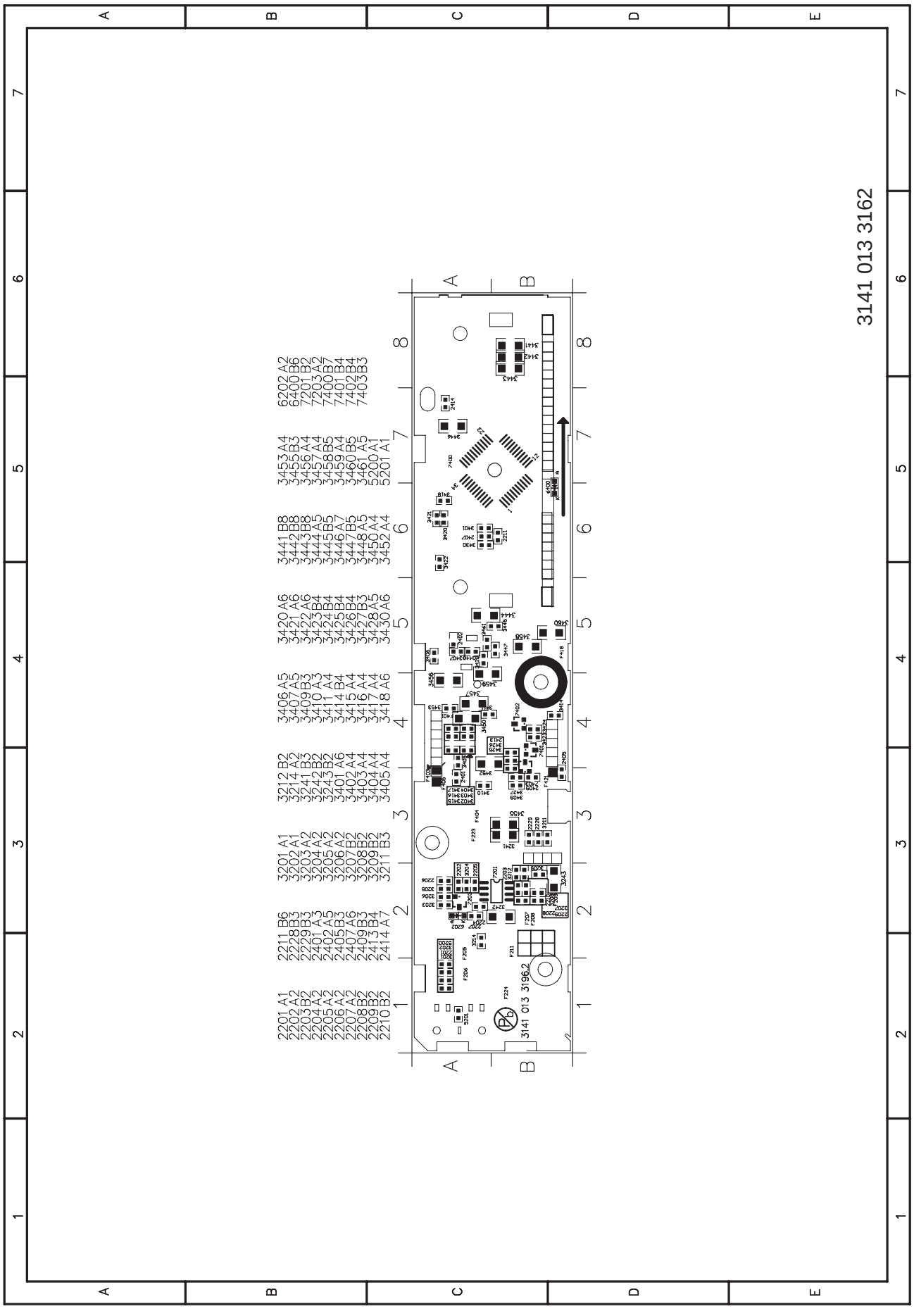
1200	F7	2201	F2	2209	G4	2403	C2	2413	D7	3206	G3	3428	A3	3410	E2	3421	D5	5200	F2	7400	B3
1201	F1	2202	F2	2210	G4	2405	E6	2414	C5	3207	G4	3402	C2	3411	E2	3422	C5	6102	G2	7401	D6
1400	B5	2203	F2	2214	D8	2406	E6	2415	C6	3208	G4	3403	C2	3414	E5	3423	D6	6400	E3	7402	D6
1401	B1	2204	F2	2215	E8	2407	E5	3201	F1	3209	F4	3404	C3	3415	B2	3424	D6	6401	C5	7403	D6
1403	E7	2205	F3	2228	E8	2409	D6	3202	F2	3212	D8	3405	C2	3416	B2	3425	D7	7405	A3	7404	C1
1411	E2	2206	G3	2229	E8	2410	D6	3203	G2	3214	E8	3406	C2	3417	B2	3426	D7	7201	F2		
1412	E2	2207	G2	2401	C2	2411	D6	3204	F3	3225	F3	3407	C2	3418	B7	3427	E7	7201	F4		
1413	E2	2208	F4	2402	D2	2412	D5	3205	G3	3401	B2	3409	E2	3420	D5	3430	A3	7203	G2		



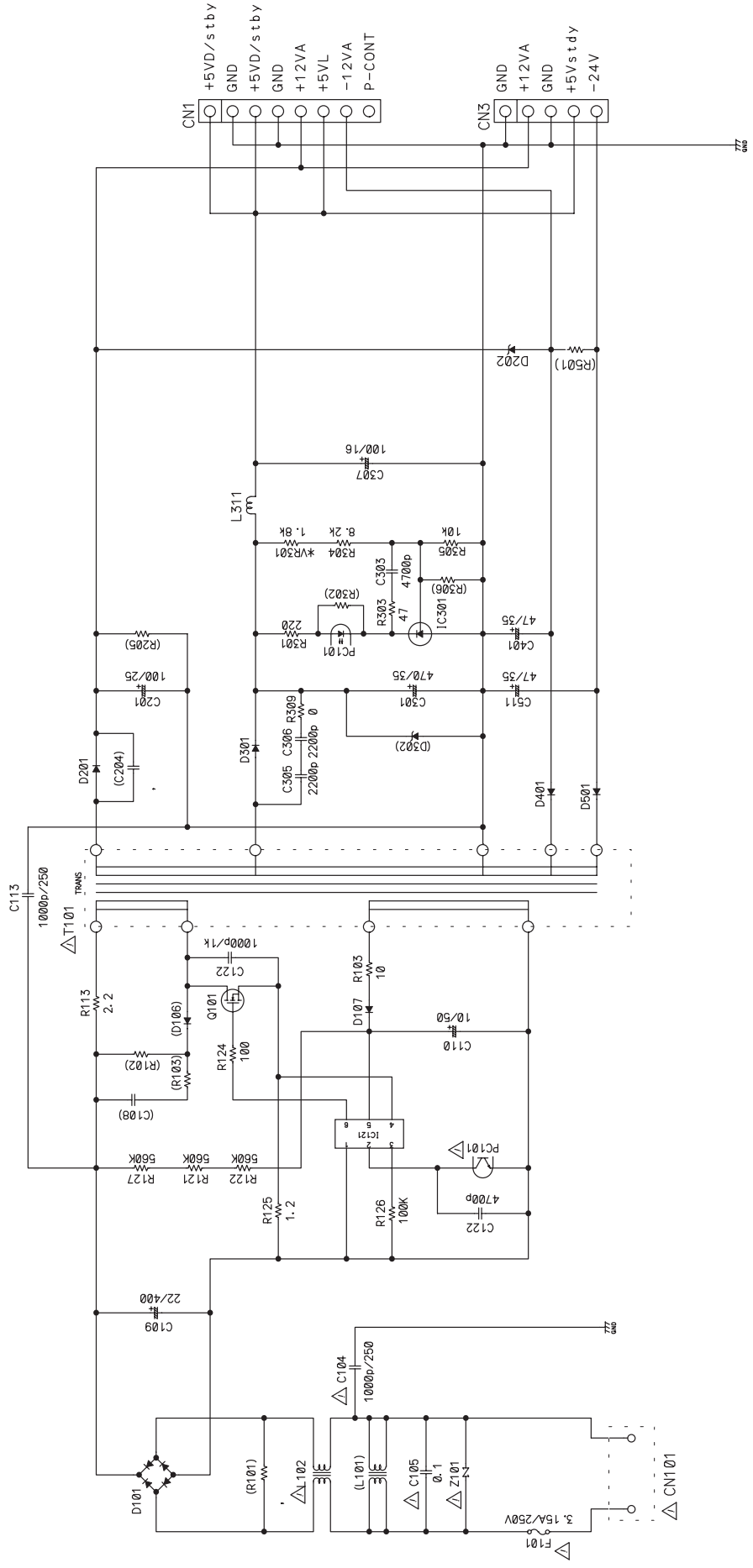
Frontboard Layout (Top view)



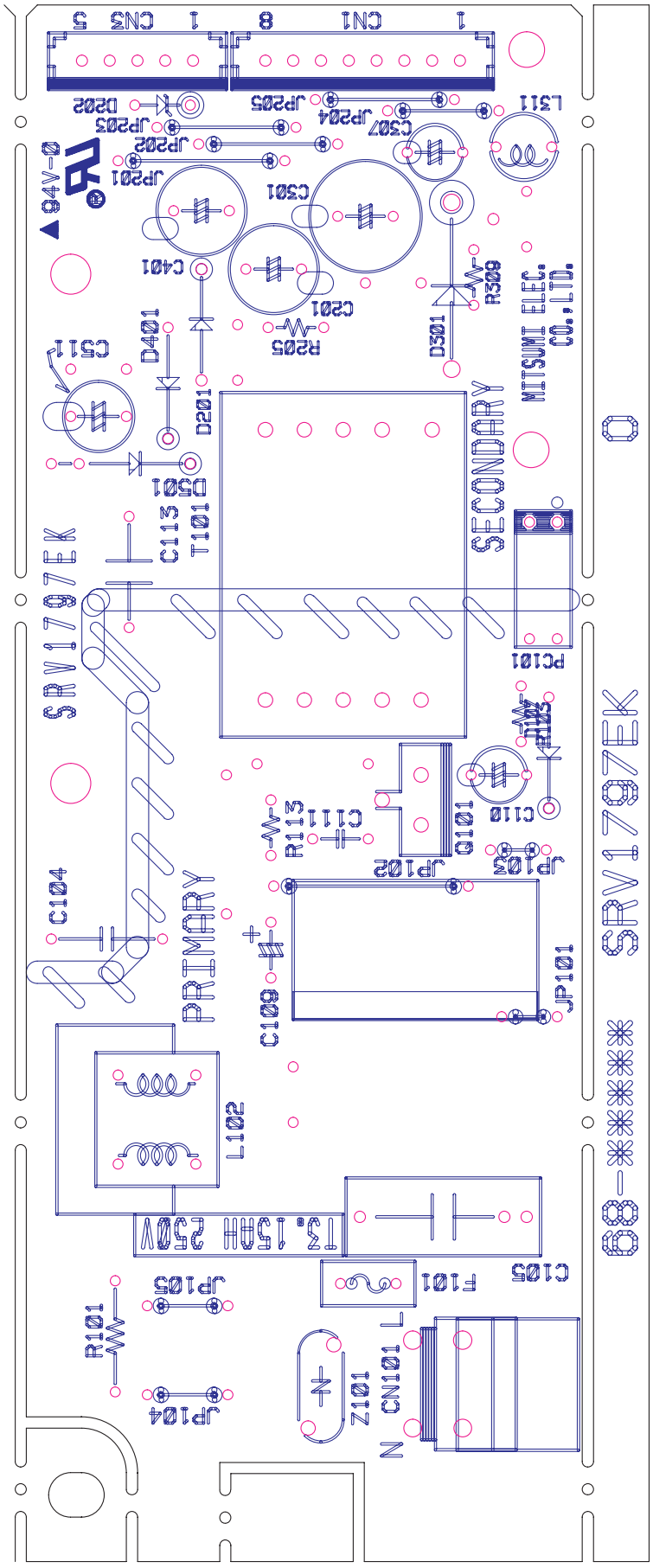
Frontboard Layout (Bottom view)



PSU Circuit Diagram (For Information Only)



PSU Layout (For Information Only)



PSU LAYOUT (FOR INFORMATION ONLY)

Firmware Upgrading

1 Burning of firmware

1. Start the CD burning software and create a new CD Project (Data disc) with the following settings:
   a. File System: No Specific Requirement
   b. Format: MODE 2/XA
   c. Recording format: Single Session (Track at once), Finalized CD
2. Place the file UPDATE VER and build.img into the root directory of the new CD project.
3. Burn the data onto a blank CDR or CDRW.

2 Firmware Upgrading

Burning of Firmware

- After burned the files to a CD-R or CD-RW,open the DVD tray and load the disc.
- The DVD will read the disc and Display “Firmware Upgrade” with 2 options “Start” and “Cancel”.
- Using the OK button on the remote control ,click on “Start”
- The OSD will show “Firmware Upgrade” “Erase and Program” “Do not Power Off”.
- Observe the DVD display “CD UPDT” and the DVD Tray door will open in less than 1 minutes,
- The DVD tray closes and put the DVD player on standby.*

*Note: At this time,key pressed on the remote control will have no effect on the set.

3 How to read the present firmware version

- Open the DVD tray
- Press Display on Remote control.
- It will show

“Cheetah170VX.XX DVD622/YYMKII I64R R1”

where X is the Version number of the DVD Firmware and Y is the Stroke version of the DVD Player.

Mono Board Testing Instruction

1 Introduction

These test instructions can be used for mono boards that have the following PCBAS 12NCs: 313924887751.

1.1 Block Diagram

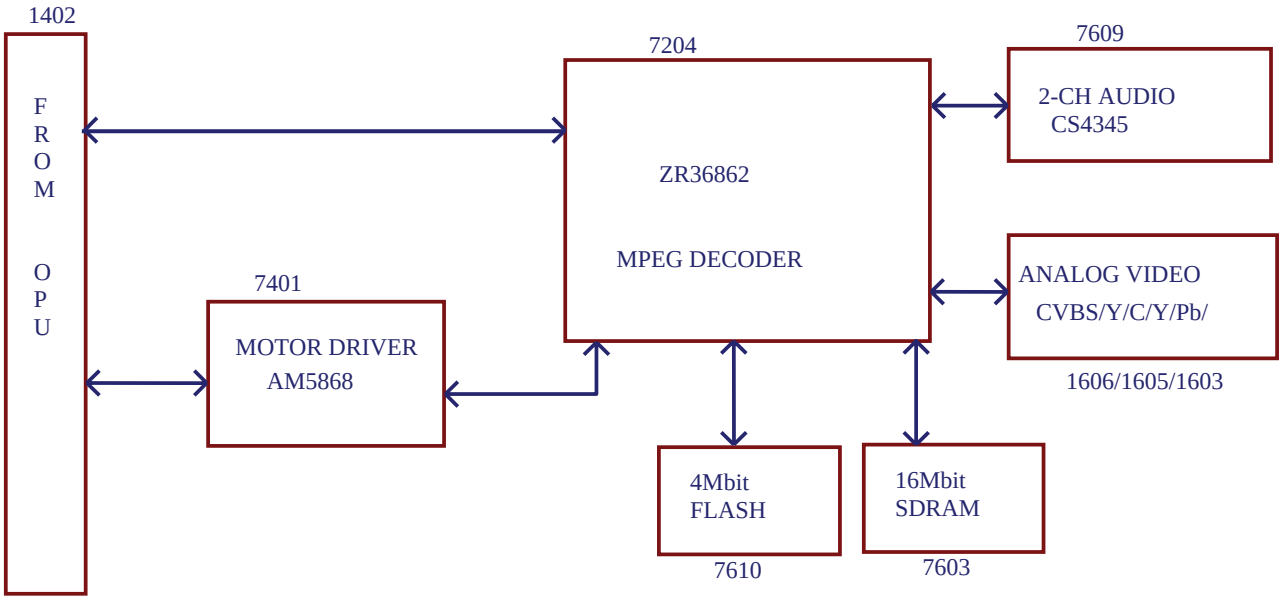


Figure 6-1: Mono Board Block Diagram

1.2 Equipment

- One unit DVD622MKII DVD player including MPEG, PSU, Front board and Loader assy.
- Oscilloscope and Digital multi-meter
- Audio precision measurement equipment (such as Audio-precision system AP1/system two)
- Color TV Set

1.3 References

IC SM ZR36862		MPEG DECODER IC:	ZORAN
IC SM AM5868		Motor Driver IC:	AMTek
IC SM IC42S16100-6T (ICSI) R		SDRAM IC:	Integrated Silicon Solution, Inc.
IC SM 39VF400A		Flash IC:	SST
IC SM CS4345		2ch DAC:	Cirrus Logic

1.4 General

* For information about schematic diagram use sheet 130 of 3139 243 3400X.
* Impedance of measuring-equipment should be >1MΩ.
* To have correct measurement we recommend using the following power supply:

Voltage	Output Voltage (V)		Output Current (mA)	
Name	Type	Tolerance	Type	Tolerance
+5V	5	± %5	1500	± %20
+12V	12	± %10	200	± %20
-12V	-12	± %10	100	± %20

* Level: For logic level measurement. Voltages must meet the minimum and maximum requirement as shown in the following table.

Voltage	Output Voltage (V)	
Type	Low	High
+3V3	<0.3V	>3.0V
+5V	<0.4V	>4.5V

2 Mono Board Test Instructions

2.1 Supply

- Supply. Check the supply to the Mono Board

Pin No.	Supply	Pin No.	Supply
1601-1	+5V/stby	1601-5	+12VA
1601-2	GND	1601-6	+5V/stby
1601-3	+5V/stby	1601-7	-12VA
1601-4	GND	1601-8	NC

2.2 System Clock

Use a frequency counter to test the signal on Item 3201, the frequency should be 26.999MHz < f < 27.001MHz.

2.3 Audio Output

Verify audio performance using Audio-Precision AP1 or System Two.

2.3.1 Channel Output Check.

Audio signal source: PHILIPS Audio Signals Test CD SBC429 No.1 (7104 087 04911)
The track menu and specifications are described in the specification of the disc.
Ensure that the player meets the following specification:

Item	Test track	Audio signal	Output Cinch
Output Voltage	15	1KHz, 0dB	2V±0.1V
S/N	49	Silence	<-90dB
THD+N	15	1KHz, 0dB	<-80dB
Frequency response	9-23	16-20,000Hz	±0.2dB
Crosstalk	67,71	1KHz	<-90dB
Channel unbalance	15	1KHz, 0dB	<0.5dB
Dynamic Range	29	1KHz	<-90dB
Mute	15 (Press Mute Key)	1KHz, 0dB	<-100dB

2.3.2 Coax Digital Output:

Connect the coaxial output (1605-2) to optical input / coaxial input of an A/V amplifier, and play PHILIPS Audio Signals Test CD SBC429 No.1 (7104 087 04911) track 15(1KHz, 0dB), the L/R speaker output of the amplifier should output a clear 1kHz tone.

2.4 Video Output

- CVBS
  1. Connect the CVBS cinch socket to the TV.
  2. The picture image should be smooth, and chroma & luminance displayed normally.

- S-Video
  1. Connect the S-Video socket to the TV.
  2. Select SETUP. Set VIDEO OUTPUT type to S-Video
  3. The picture image should be smooth, and chroma & luminance displayed normally.

- YUV
  1. Connect the YUV cinch socket to the TV.
  2. Select SETUP. Set VIDEO OUTPUT type to YUV.
  3. The picture image should be smooth, and chroma & luminance displayed normally.

- Progressive Scan
  1. Connect the YUV cinch socket to the TV.
  2. Select SETUP. Set VIDEO OUTPUT type to YUV and Progressive Mode to ON.
  3. Ensure the picture output is correct during playback.

DVD622MKII/37/93/97

0336	2422 070 98235	⚠	MAINSCORD UL 6A 1M8 VH BK B	/37
	2422 070 98232	⚠	MAINSCORD CHN 6A 1M8 VH BK B	/93
	3141 018 71300	⚠	MAINSCORD M7.92VH 1.60M	/97
0381	2422 076 00304		CABLE CINCH/CINCH 1M5 YE/RD/WH	/37/93/97
0384	3141 017 90201		RC2K14 (BLACK VERSION)	/37/93/97
1001	3139 247 11101		MODULE PSU VMF2005 WR MIT	/37/93/97
1002	3139 247 11321		LOADER ASSY DVD622/37	/37
1002	3139 247 11241		LOADER HD62	/93
1002	3139 247 11251		LOADER HD62	/97
1004	3141 018 05142		PBAS FRONT MDV423/17 LF	/97
1005	3139 248 84042		PCBAS MONOBOARD DVD622	/37
1005	3139 248 84444		PCBAS MONOBOARD DVD622	/93
1005	3139 248 84454		PCBAS MONOBOARD DVD622	/97

DVD622MKII/37/93

0200	3139 247 61031		FRONT ASSY DVD622	/37
	3139 247 60501		FRONT ASSY DVD622	/93
0207	3139 247 61291		DOOR TRAY ASSY DVD622 MKII	/37/93
0336	2422 070 98235	⚠	MAINSCORD UL 6A 1M8 VH BK B	/37
	2422 070 98232	⚠	MAINSCORD CHN 6A 1M8 VH BK B	/93
0381	2422 076 00718		CBLE CINCH 1M5 CINCH RDYEWH B	/37/93
0384	3141 017 90201		RC2K14 (BLACK VERSION)	/37/93
1001	3139 247 12432		PSU DVD622MK2 WR SRV1797EK MIT	/37/93
1004	3139 248 87771		PCBAS FRONT DVD622MKII	/37/93
1005	3139 248 87751		PCBAS MONO DVD622MKII	/37
1005	3139 248 89311		PCBAS MONO DVD622MKII	/93
1006	3139 248 00301		LOADER ASSY DVD622MKII	/37/93
1005	3141 018 04202		LOADER WXD-8136U(ASA DV34 250)	/97

Note: Only the parts mentioned in this list are normal service spare parts

Revision List:

Version 1.0

* Initial Release

Version 1.1

* Revise Monoboard Point3 in page 17 – 20 of document.

* Revise Spare Parts List of DVD622MKII 37/93.

* Included Firmware upgrading in page 28 of document.

* Included Testing Instructions in page 29 – 31 of document.

* Revise PSU info of DVD622MKII

Service
Service
Service

Service Information

General

Introduction of SD3.x L7 & L8 mono board:

Changes from L4 to L7

- SDRAM footprint, at pos. 7404 and 7405, has been removed.
- Additional 2 resistors, at pos. 3424 and 3425, used for the 90ns ROM type.
- Relayout to improve EMC.

Changes from L7 to L8

- Removed mostly jumpers and relayout to improve EMC.

Since the change from L7 to L8 is minimal, only the L8 mono board schematic, layout, and parts list are published.
This service information will supplement the SD3.0 service manual (3122 785 11010) and service information (3122 785 40490).

Remarks

SD3.x L7 & L8 monoboard has been introduced as a running change during production for the following models:.

VFM2001

- EU models:
  - DVD612/0x2;DVD612S/002;DVD622/0x2;DVD712/0x1;DVD722/0x1;DVD752/0X1;DVD762/0x1;DVD870/0x1;DVD870P/0x1;DVD870L/0x1
- Non-EU models:
  - DVD703/032;DVD703/692;DVD703/752;DVD703/783;DVD712/171;DVD712/172;DVD870P/171

STEP2001

- EU models:
  - DVD952/0x1;DVDQ40/0x1;DVDQ50/0x1
- Non-EU models:
  - DVDQ50/171; DVDQ50/69x; DVDQ50/75x; DVDQ50/78x

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Published by MW 0272 Service PaCE Printed in the Netherlands Subject to modification EN 3122 785 40740

PHILIPS

Spare Parts List

Mechanism

Various

0001	9305 023 61104	VAL6011/04

Mono PWB

Various

1100	2422 025 16543	CON BM H 4P M 2.00 PH SMD R
1104	2422 025 15963	CON BM H 24P F 0.50 FFC SMD R
1106	2422 025 16158	CON BM H 8P F 1.00 FFC 0.3 R
1205	2422 540 98428	RES CER SM 8M467 CSTCC8.46MHz R
1300	2422 540 98426	RES CER SM 6MHz CSTCC6.00MHz R
1301	4822 267 51454	CONN. 11P FEMALE
1501	2422 025 16702	CON BM H 5P M 2.00 PH SMD R
1506	4822 267 60409	CONN 22P FEMALE
1600	2422 025 16705	CON BM H 12P M 2.00 PH SMD R
1602	2422 025 16703	CON H 7P M 2.00 PH SMD R
1603	2422 025 16389	CON BM V 22P F 1.00 FFC 0.3 R
1604	2422 025 16388	CON BM V 16P F 1.00 FFC 0.3 R

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2100	4822 126 14305	100nF 10% 16V 0603
2101	4822 126 14305	100nF 10% 16V 0603
2103	4822 124 80151	47µF 16V
2104	4822 126 13193	4.7nF 10% 63V
2105	4822 122 33761	22pF 5% 50V
2107	4822 126 13956	68pF 5% 63V 0603
2108	4822 126 14315	390pF 5% 50V 0603
2109	2020 552 95697	
2110	2222 861 15222	63V 2N2 5%
2111	4822 126 14305	100nF 10% 16V 0603
2112	5322 126 11578	1nF 10% 50V 0603
2113	4822 126 14305	100nF 10% 16V 0603
2114	4822 122 31765	100pF 2% 63V 1206
2115	4822 126 14305	100nF 10% 16V 0603
2116	4822 126 14305	100nF 10% 16V 0603
2117	4822 126 14305	100nF 10% 16V 0603
2118	3198 017 42230	0603 50V 22nF COL
2119	3198 017 42230	0603 50V 22nF COL
2120	4822 126 14305	100nF 10% 16V 0603
2121	4822 126 13879	220nF 20% 16V
2122	3198 017 42230	0603 50V 22nF COL
2123	4822 126 14305	100nF 10% 16V 0603
2124	4822 126 14305	100nF 10% 16V 0603
2125	4822 126 14305	100nF 10% 16V 0603
2126	4822 126 14305	100nF 10% 16V 0603
2127	4822 126 14305	100nF 10% 16V 0603
2128	4822 126 14508	180pF 5% 50V 0603
2129	4822 126 14508	180pF 5% 50V 0603
2130	4822 122 33761	22pF 5% 50V
2131	4822 126 14494	22nF 10% 25V 0603
2136	4822 126 14305	100nF 10% 16V 0603
2137	4822 126 14305	100nF 10% 16V 0603
2138	4822 126 14305	100nF 10% 16V 0603
2139	4822 126 14305	100nF 10% 16V 0603
2140	4822 126 14241	0603 50V 330P COL R
2141	4822 122 33761	22pF 5% 50V
2142	5322 126 11583	10nF 10% 50V 0603
2143	4822 126 13883	220pF 5% 50V
2144	4822 126 13883	220pF 5% 50V
2145	4822 126 13883	220pF 5% 50V
2203	4822 126 14305	100nF 10% 16V 0603
2204	4822 126 14305	100nF 10% 16V 0603
2205	4822 126 14305	100nF 10% 16V 0603
2206	4822 126 14549	33nF 16V O6O3
2207	5322 126 11578	1nF 10% 50V 0603
2208	4822 126 14305	100nF 10% 16V 0603
2209	4822 126 14305	100nF 10% 16V 0603
2210	5322 126 11578	1nF 10% 50V 0603
2212	4822 126 14305	100nF 10% 16V 0603
2213	4822 126 14305	100nF 10% 16V 0603
2214	3198 017 42230	0603 50V 22nF COL
2215	4822 124 23237	22µF 6.3V
2216	5322 126 11578	1nF 10% 50V 0603
2226	4822 126 14305	100nF 10% 16V 0603
2227	4822 126 14305	100nF 10% 16V 0603
2228	4822 126 14305	100nF 10% 16V 0603
2229	4822 126 14305	100nF 10% 16V 0603
2300	4822 126 14305	100nF 10% 16V 0603
2301	4822 126 14305	100nF 10% 16V 0603
2302	4822 126 14305	100nF 10% 16V 0603
2303	4822 124 80349	47µF 20% 6.3V
2304	3198 017 42230	0603 50V 22nF COL
2305	3198 017 42230	0603 50V 22nF COL
2306	4822 124 23002	10µF 16V
2307	3198 017 42230	0603 50V 22nF COL
2309	4822 126 14305	100nF 10% 16V 0603
2310	4822 126 14305	100nF 10% 16V 0603
2314	4822 126 14305	100nF 10% 16V 0603
2315	4822 126 14305	100nF 10% 16V 0603
2318	5322 122 33861	120pF 10% 50V
2319	4822 126 11669	27pF
2320	4822 126 14305	100nF 10% 16V 0603
2321	4822 126 14305	100nF 10% 16V 0603
2401	4822 126 14305	100nF 10% 16V 0603
2402	4822 126 14305	100nF 10% 16V 0603
2403	4822 126 14305	100nF 10% 16V 0603
2404	4822 126 14305	100nF 10% 16V 0603
2405	4822 126 14305	100nF 10% 16V 0603
2406	4822 126 14305	100nF 10% 16V 0603
2407	4822 126 14305	100nF 10% 16V 0603
2408	4822 126 14305	100nF 10% 16V 0603
2409	4822 126 14305	100nF 10% 16V 0603
2410	4822 126 14305	100nF 10% 16V 0603
2411	4822 126 14305	100nF 10% 16V 0603
2412	4822 126 14305	100nF 10% 16V 0603
2413	4822 126 14305	100nF 10% 16V 0603
2418	4822 124 12095	100µF 20% 16V
2419	4822 124 80349	47µF 20% 6.3V
2420	4822 124 80349	47µF 20% 6.3V
2421	2238 586 59812	0603 50V 100NP80M
2422	2238 586 59812	0603 50V 100NP80M
2423	4822 126 14305	100nF 10% 16V 0603
2424	2238 586 59812	0603 50V 100NP80M
2425	2238 586 59812	0603 50V 100NP80M
2426	4822 126 14305	100nF 10% 16V 0603
2427	4822 126 14305	100nF 10% 16V 0603
2500	4822 126 14305	100nF 10% 16V 0603
2503	4822 126 14305	100nF 10% 16V 0603
2504	3198 030 74780	EL SM 35V 4U7 PM20 COL R
2507	4822 126 14494	22nF 10% 25V 0603
2509	4822 124 23002	10µF 16V
2510	4822 126 14305	100nF 10% 16V 0603
2511	4822 124 23002	10µF 16V
2512	4822 126 14305	100nF 10% 16V 0603
2513	4822 122 33761	22pF 5% 50V
2514	4822 122 33761	22pF 5% 50V
2515	4822 122 33761	22pF 5% 50V
2516	4822 122 33761	22pF 5% 50V
2517	4822 126 14305	100nF 10% 16V 0603
2518	3198 030 74780	EL SM 35V 4U7 PM20 COL R
2519	4822 126 14305	100nF 10% 16V 0603
2520	4822 126 14305	100nF 10% 16V 0603
2521	4822 126 14305	100nF 10% 16V 0603
2522	4822 126 14305	100nF 10% 16V 0603
2523	4822 126 14305	100nF 10% 16V 0603
2524	4822 126 14305	100nF 10% 16V 0603
2525	4822 126 14305	100nF 10% 16V 0603
2526	4822 126 14305	100nF 10% 16V 0603
2527	4822 126 14305	100nF 10% 16V 0603
2528	4822 126 14305	100nF 10% 16V 0603
2529	3198 030 74780	EL SM 35V 4U7 PM20 COL R
2530	4822 126 14305	100nF 10% 16V 0603
2531	4822 126 14305	100nF 10% 16V 0603
2532	4822 122 33777	47pF 5% 63V
2533	4822 122 33777	47pF 5% 63V
2534	5322 126 11578	1nF 10% 50V 0603
2535	5322 126 11578	1nF 10% 50V 0603
2536	4822 126 14305	100nF 10% 16V 0603
2537	4822 126 14305	100nF 10% 16V 0603
2538	4822 126 14305	100nF 10% 16V 0603
2539	4822 126 14305	100nF 10% 16V 0603
2540	4822 126 14305	100nF 10% 16V 0603
2600	4822 126 14494	22nF 10% 25V 0603
2601	4822 126 14247	0603 50V 1N5 COL R
2602	4822 126 14247	0603 50V 1N5 COL R
2603	4822 126 14305	100nF 10% 16V 0603
2604	4822 124 12095	100µF 20% 16V
2605	4822 126 14494	22nF 10% 25V 0603
2606	4822 124 12095	100µF 20% 16V
2607	4822 124 12095	100µF 20% 16V
2608	4822 124 23002	10µF 16V
2609	4822 124 80151	47µF 16V
2610	4822 126 14305	100nF 10% 16V 0603
2611	4822 124 12095	100µF 20% 16V
2612	4822 126 14305	100nF 10% 16V 0603
2613	4822 126 14305	100nF 10% 16V 0603
2614	4822 122 33777	47pF 5% 63V
2615	4822 122 33777	47pF 5% 63V
2616	4822 122 33777	47pF 5% 63V
2617	4822 122 33777	47pF 5% 63V
2619	4822 126 14305	100nF 10% 16V 0603
2620	4822 122 33777	47pF 5% 63V
2621	4822 122 33777	47pF 5% 63V
2622	4822 122 33777	47pF 5% 63V
2623	4822 122 33777	47pF 5% 63V
2624	4822 122 33777	47pF 5% 63V
2625	4822 122 33777	47pF 5% 63V
2626	4822 122 33777	47pF 5% 63V
2627	4822 122 33777	47pF 5% 63V
2632	4822 124 12095	100µF 20% 16V
2633	4822 124 12095	100µF 20% 16V
2634	4822 126 14305	100nF 10% 16V 0603
2635	4822 126 14305	100nF 10% 16V 0603
2636	4822 126 14305	100nF 10% 16V 0603
2637	4822 126 14305	100nF 10% 16V 0603
2638	4822 126 14305	100nF 10% 16V 0603
2639	4822 126 14305	100nF 10% 16V 0603
2641	4822 122 33761	22pF 5% 50V
2642	4822 122 33761	22pF 5% 50V
2647	4822 124 23002	10µF 16V
2648	4822 126 14305	100nF 10% 16V 0603

⊣WW⊢

3100	4822 117 11152	4Ω7 5%
3102	5322 117 13034	1k5 1% 0.063W 0603 RC22H
3103	5322 117 13034	1k5 1% 0.063W 0603 RC22H
3104	5322 117 13062	390Ω 1% 0.063W 0603 RC22H
3105	4822 051 30103	10k 5% 0.062W
3106	4822 051 30479	47Ω 5% 0.062W
3107	4822 051 20228	2Ω2 5% 0.1W
3108	4822 051 20228	2Ω2 5% 0.1W
3110	4822 051 30479	47Ω 5% 0.062W
3111	5322 117 13058	150Ω 1% 0.063W 0603 RC22H
3112	5322 117 13021	47Ω 1% 0.063W 0603 RC22H
3114	4822 051 20228	2Ω2 5% 0.1W
3115	4822 051 20228	2Ω2 5% 0.1W
3116	5322 117 13042	3k9 1% 0.063W 0603 RC22H
3117	4822 051 30181	180Ω 5% 0.062W
3118	4822 051 30681	680Ω 5% 0.062W
3119	5322 117 13062	390Ω 1% 0.063W 0603 RC22H
3120	4822 051 30102	1k 5% 0.062W
3121	4822 051 30273	27k 5% 0.062W
3122	4822 051 30471	470Ω 5% 0.062W
3123	4822 051 30103	10k 5% 0.062W
3124	4822 051 30471	470Ω 5% 0.062W
3125	4822 051 30103	10k 5% 0.062W
3126	4822 051 30103	10k 5% 0.062W
3127	4822 051 30223	22k 5% 0.062W
3128	2322 704 69109	
3129	4822 051 30392	3k9 5% 0.063W 0603
3130	4822 051 20228	2Ω2 5% 0.1W
3131	4822 051 20228	2Ω2 5% 0.1W
3132	4822 051 20228	2Ω2 5% 0.1W
3133	4822 051 20228	2Ω2 5% 0.1W
3134	5322 117 13047	330Ω 1% 0.063W 0603 RC22H
3135	4822 117 13613	2Ω2 5% 0603
3137	4822 117 13613	2Ω2 5% 0603
3138	5322 117 13053	6k8 1% 0.063W 0603 RC22H
3139	4822 117 12917	1Ω 5% 0.062W CASE0603
3140	4822 051 30479	47Ω 5% 0.062W
3141	4822 117 11152	4Ω7 5%
3142	5322 117 13028	12k 1% 0.063W 0603 RC22H
3143	5322 117 13043	220Ω 1% 0.063W 0603 RC22H
3144	2322 704 69109	
3146	4822 051 30103	10k 5% 0.062W
3147	4822 051 30103	10k 5% 0.062W
3148	5322 117 13022	22k 1% 0.063W 0603 RC22H
3153	4822 117 12139	22Ω 5% 0.062W
3155	4822 051 30103	10k 5% 0.062W
3157	4822 051 30103	10k 5% 0.062W

3158	5322 117 13017	100Ω 1% 0.063W 0603 RC22H
3160	4822 051 30101	100Ω 5% 0.062W
3161	4822 117 13613	2Ω2 5% 0603
3162	4822 051 30101	100Ω 5% 0.062W
3163	4822 051 30273	27k 5% 0.062W
3164	4822 117 13613	2Ω2 5% 0603
3165	5322 117 13063	120Ω 1% 0.063W 0603 RC22H
3166	4822 051 30393	39k 5% 0.062W
3167	4822 051 30101	100Ω 5% 0.062W
3168	5322 117 13047	330Ω 1% 0.063W 0603 RC22H
3169	4822 051 30101	100Ω 5% 0.062W
3170	4822 051 30101	100Ω 5% 0.062W
3171	4822 051 30101	100Ω 5% 0.062W
3172	4822 117 13632	100k 1% 0603 0.62W
3173	4822 117 13632	100k 1% 0603 0.62W
3174	4822 117 11152	4Ω7 5%
3175	4822 117 13613	2Ω2 5% 0603
3176	4822 051 30153	15k 5% 0.062W
3178	4822 117 11151	1Ω 5%
3179	4822 051 30221	220Ω 5% 0.062W
3180	4822 117 13632	100k 1% 0603 0.62W
3181	4822 051 30561	560Ω 5% 0.062W
3182	5322 117 13018	1k0 1% 0.063W 0603 RC22H
3183	5322 117 13017	100Ω 1% 0.063W 0603 RC22H
3184	2322 704 61204	
3185	4822 117 11151	1Ω 5%
3187	4822 051 30273	27k 5% 0.062W
3189	4822 051 30008	0Ω jumper
3190	4822 051 30008	0Ω jumper
3191	4822 051 30008	0Ω jumper
3192	4822 051 30008	0Ω jumper
3193	4822 051 30008	0Ω jumper
3194	4822 051 30008	0Ω jumper
3195	4822 051 30008	0Ω jumper
3197	4822 051 30008	0Ω jumper
3198	5322 117 13049	470Ω 1% 0.063W 0603 RC22H
3199	5322 117 13042	3k9 1% 0.063W 0603 RC22H
3200	4822 051 30103	10k 5% 0.062W
3201	4822 117 11151	1Ω 5%
3202	4822 117 11151	1Ω 5%
3203	4822 051 30105	1M 5% 0.062W
3204	4822 051 30331	330Ω 5% 0.062W
3205	4822 051 30103	10k 5% 0.062W
3206	4822 051 30103	10k 5% 0.062W
3208	4822 051 30272	2k7 5% 0.062W
3209	4822 051 30472	4k7 5% 0.062W
3210	4822 051 30392	3k9 5% 0.063W 0603
3211	4822 051 30472	4k7 5% 0.062W
3212	4822 117 11152	4Ω7 5%
3213	4822 117 11152	4Ω7 5%
3214	4822 051 30392	3k9 5% 0.063W 0603
3215	4822 051 30103	10k 5% 0.062W
3219	4822 051 30103	10k 5% 0.062W
3220	4822 051 30103	10k 5% 0.062W
3221	4822 051 30103	10k 5% 0.062W
3224	4822 051 30151	150Ω 5% 0.062W
3225	2322 704 62004	
3226	4822 051 30103	10k 5% 0.062W
3227	4822 051 30472	4k7 5% 0.062W
3229	4822 051 30123	12k 5% 0.062W
3230	4822 051 30103	10k 5% 0.062W
3231	4822 051 30103	10k 5% 0.062W
3232	4822 117 13613	2Ω2 5% 0603
3234	4822 117 12902	8k2 1% 0.063W 0603
3235	4822 117 13632	100k 1% 0603 0.62W
3236	4822 051 30472	4k7 5% 0.062W
3237	4822 051 30103	10k 5% 0.062W
3238	4822 051 30103	10k 5% 0.062W
3239	4822 051 30008	0Ω jumper
3240	4822 051 30103	10k 5% 0.062W
3242	4822 051 30008	0Ω jumper
3243	4822 051 30008	0Ω jumper
3246	4822 051 30008	0Ω jumper
3247	4822 051 30008	0Ω jumper
3249	4822 051 30008	0Ω jumper
3250	4822 051 30008	0Ω jumper
3251	4822 051 30008	0Ω jumper
3252	4822 051 30008	0Ω jumper
3253	4822 051 30008	0Ω jumper
3254	4822 051 30008	0Ω jumper
3255	4822 051 30008	0Ω jumper
3256	4822 051 30008	0Ω jumper
3257	4822 051 30008	0Ω jumper
3258	4822 051 30008	0Ω jumper
3259	4822 117 11151	1Ω 5%
3260	4822 117 11151	1Ω 5%
3261	4822 051 30102	1k 5% 0.062W
3262	4822 051 30008	0Ω jumper
3263	4822 051 30008	0Ω jumper
3265	4822 051 30472	4k7 5% 0.062W
3266	4822 117 13632	100k 1% 0603 0.62W
3300	4822 117 11152	4Ω7 5%
3301	4822 051 30105	1M 5% 0.062W
3302	4822 051 30221	220Ω 5% 0.062W
3304	4822 051 30272	2k7 5% 0.062W
3305	4822 051 30272	2k7 5% 0.062W
3309	4822 051 30103	10k 5% 0.062W
3310	4822 051 30223	22k 5% 0.062W
3311	4822 051 30223	22k 5% 0.062W
3312	4822 051 30472	4k7 5% 0.062W
3313	4822 051 30472	4k7 5% 0.062W
3316	4822 051 20108	1Ω 5% 0.1W
3317	4822 051 20108	1Ω 5% 0.1W
3318	4822 051 30472	4k7 5% 0.062W
3319	4822 051 30479	47Ω 5% 0.062W
3320	4822 051 30472	4k7 5% 0.062W
3321	4822 051 30682	6k8 5% 0.062W
3322	5322 117 13026	4k7 1% 0.063W 0603 RC22H
3323	5322 117 13026	4k7 1% 0.063W 0603 RC22H
3324	4822 117 13632	100k 1% 0603 0.62W
3325	4822 051 30682	6k8 5% 0.062W
3326	4822 051 30479	47Ω 5% 0.062W
3327	4822 051 30682	6k8 5% 0.062W
3328	4822 051 30223	22k 5% 0.062W
3329	4822 051 30223	22k 5% 0.062W
3330	4822 051 30223	22k 5% 0.062W
3331	4822 051 30332	3k3 5% 0.062W
3332	4822 051 30332	3k3 5% 0.062W
3333	4822 051 30101	100Ω 5% 0.062W
3334	4822 051 30101	100Ω 5% 0.062W
3335	4822 051 30101	100Ω 5% 0.062W
3336	4822 051 30101	100Ω 5% 0.062W
3337	4822 051 30101	100Ω 5% 0.062W
3338	4822 051 30101	100Ω 5% 0.062W
3339	4822 051 30008	0Ω jumper
3340	4822 051 30008	0Ω jumper
3347	4822 117 11152	4Ω7 5%
3348	4822 117 11152	4Ω7 5%
3403	4822 051 30103	10k 5% 0.062W
3404	4822 051 30103	10k 5% 0.062W
3405	4822 051 30103	10k 5% 0.062W
3412	4822 051 30008	0Ω jumper
3414	4822 051 30008	0Ω jumper
3416	4822 051 30008	0Ω jumper
3419	4822 051 30103	10k 5% 0.062W
3424	4822 051 30008	0Ω jumper
3500	4822 051 30332	3k3 5% 0.062W
3501	4822 051 30332	3k3 5% 0.062W
3502	4822 051 30223	22k 5% 0.062W
3505	4822 051 30103	10k 5% 0.062W
3506	4822 051 30472	4k7 5% 0.062W
3508	4822 051 30332	3k3 5% 0.062W
3509	4822 051 30103	10k 5% 0.062W
3512	4822 051 30103	10k 5% 0.062W
3513	4822 051 30103	10k 5% 0.062W
3514	4822 051 30103	10k 5% 0.062W
3515	4822 051 30103	10k 5% 0.062W
3517	4822 051 30332	3k3 5% 0.062W
3518	4822 051 30332	3k3 5% 0.062W
3519	4822 051 30103	10k 5% 0.062W
3520	4822 051 30332	3k3 5% 0.062W
3521	4822 117 13613	2Ω2 5% 0603
3522	4822 117 13613	2Ω2 5% 0603
3523	4822 051 30101	100Ω 5% 0.062W
3524	4822 051 30101	100Ω 5% 0.062W
3525	4822 051 30101	100Ω 5% 0.062W
3530	2322 704 61303	RST SM 0603 RC22H 13k PM1 R
3531	2322 704 61303	RST SM 0603 RC22H 13k PM1 R
3532	4822 051 30101	100Ω 5% 0.062W
3533	5322 117 13042	3k9 1% 0.063W 0603 RC22H
3534	5322 117 13042	3k9 1% 0.063W 0603 RC22H
3537	4822 051 30103	10k 5% 0.062W
3571	4822 051 30689	68Ω 5% 0.063W 0603 RC21 RST SM
3572	4822 051 30689	68Ω 5% 0.063W 0603 RC21 RST SM
3580	4822 117 13573	NETW 4 X 47Ω 5% MNR14
3581	4822 117 13573	NETW 4 X 47Ω 5% MNR14
3583	4822 051 30008	0Ω jumper
3588	4822 051 30332	3k3 5% 0.062W
3589	4822 051 30332	3k3 5% 0.062W
3590	4822 051 30681	680Ω 5% 0.062W
3591	4822 051 30152	1k5 5% 0.062W
3592	4822 051 30101	100Ω 5% 0.062W
3594	4822 051 30101	100Ω 5% 0.062W
3605	4822 051 30008	0Ω jumper
3606	4822 117 12925	47k 1% 0.063W 0603
3607	4822 117 13632	100k 1% 0603 0.62W
3608	4822 117 13632	100k 1% 0603 0.62W
3609	4822 117 13632	100k 1% 0603 0.62W
3610	4822 051 30103	10k 5% 0.062W
3611	4822 051 30103	10k 5% 0.062W
3612	4822 051 30103	10k 5% 0.062W
3613	4822 051 30103	10k 5% 0.062W
3614	4822 051 30103	10k 5% 0.062W
3615	4822 051 30103	10k 5% 0.062W
3616	4822 051 30472	4k7 5% 0.062W
3617	4822 051 30472	4k7 5% 0.062W
3618	4822 051 30223	22k 5% 0.062W
3619	4822 051 30223	22k 5% 0.062W
3620	4822 051 30101	100Ω 5% 0.062W
3621	4822 051 30101	100Ω 5% 0.062W
3622	4822 051 30101	100Ω 5% 0.062W
3623	4822 051 30101	100Ω 5% 0.062W
3624	4822 051 30101	100Ω 5% 0.062W
3625	4822 051 30101	100Ω 5% 0.062W
3626	4822 051 30102	1k 5% 0.062W
3627	4822 051 30471	470Ω 5% 0.062W
3628	4822 051 30471	470Ω 5% 0.062W
3629	4822 051 30472	4k7 5% 0.062W
3630	4822 051 30221	220Ω 5% 0.062W
3631	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3632	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3633	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3635	4822 051 30682	6k8 5% 0.062W
3636	4822 051 30682	6k8 5% 0.062W
3637	4822 051 30332	3k3 5% 0.062W
3642	4822 051 30103	10k 5% 0.062W
3647	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3648	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3651	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3654	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3655	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3656	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3657	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3658	4822 051 30102	1k 5% 0.062W
3659	4822 051 30102	1k 5% 0.062W
3660	4822 051 30102	1k 5% 0.062W
3661	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3662	4822 051 30102	1k 5% 0.062W
3663	4822 051 30102	1k 5% 0.062W
3664	5322 117 13059	560Ω 1% 0.063W 0603 RC22H
3665	4822 117 12139	22Ω 5% 0.062W
3667	4822 157 11499	BLM11P600SPT
3672	4822 051 30479	47Ω 5% 0.062W
3677	4822 051 30008	0Ω jumper
3678	4822 051 30008	0Ω jumper
3679	4822 051 30008	0Ω jumper
3681	4822 051 30008	0Ω jumper
3683	4822 051 30008	0Ω jumper
3685	4822 051 30008	0Ω jumper
3686	4822 051 30223	22k 5% 0.062W
3687	4822 051 30223	22k 5% 0.062W
3688	4822 051 30472	4k7 5% 0.062W
3689	4822 051 30223	22k 5% 0.062W
3692	4822 051 30331	330Ω 5% 0.062W
3693	4822 051 30331	330Ω 5% 0.062W
3694	4822 051 30681	680Ω 5% 0.062W
3695	4822 051 30681	680Ω 5% 0.062W
3705	4822 051 30103	10k 5% 0.062W
3706	4822 051 30103	10k 5% 0.062W
3707	4822 051 30472	4k7 5% 0.062W
3708	4822 051 30008	0Ω jumper

5200	4822 157 11717	BLM31P500SPT
5300	4822 157 11717	BLM31P500SPT
5301	4822 157 11717	BLM31P500SPT
5402	4822 157 11499	BLM11P600SPT
5403	4822 157 11499	BLM11P600SPT
5501	4822 157 70299	2.2µH (NL322522T-2R2J)
5502	4822 157 70299	2.2µH (NL322522T-2R2J)
5503	4822 157 71206	BLM21A601SPT
5504	4822 157 71206	BLM21A601SPT
5600	4822 157 71206	BLM21A601SPT
5601	4822 157 11499	BLM11P600SPT
5602	4822 157 70651	12µH (NL322522T-120J)
5603	4822 157 71206	BLM21A601SPT
5604	4822 157 70651	12µH (NL322522T-120J)
5605	4822 157 70651	12µH (NL322522T-120J)
5606	4822 157 70651	12µH (NL322522T-120J)

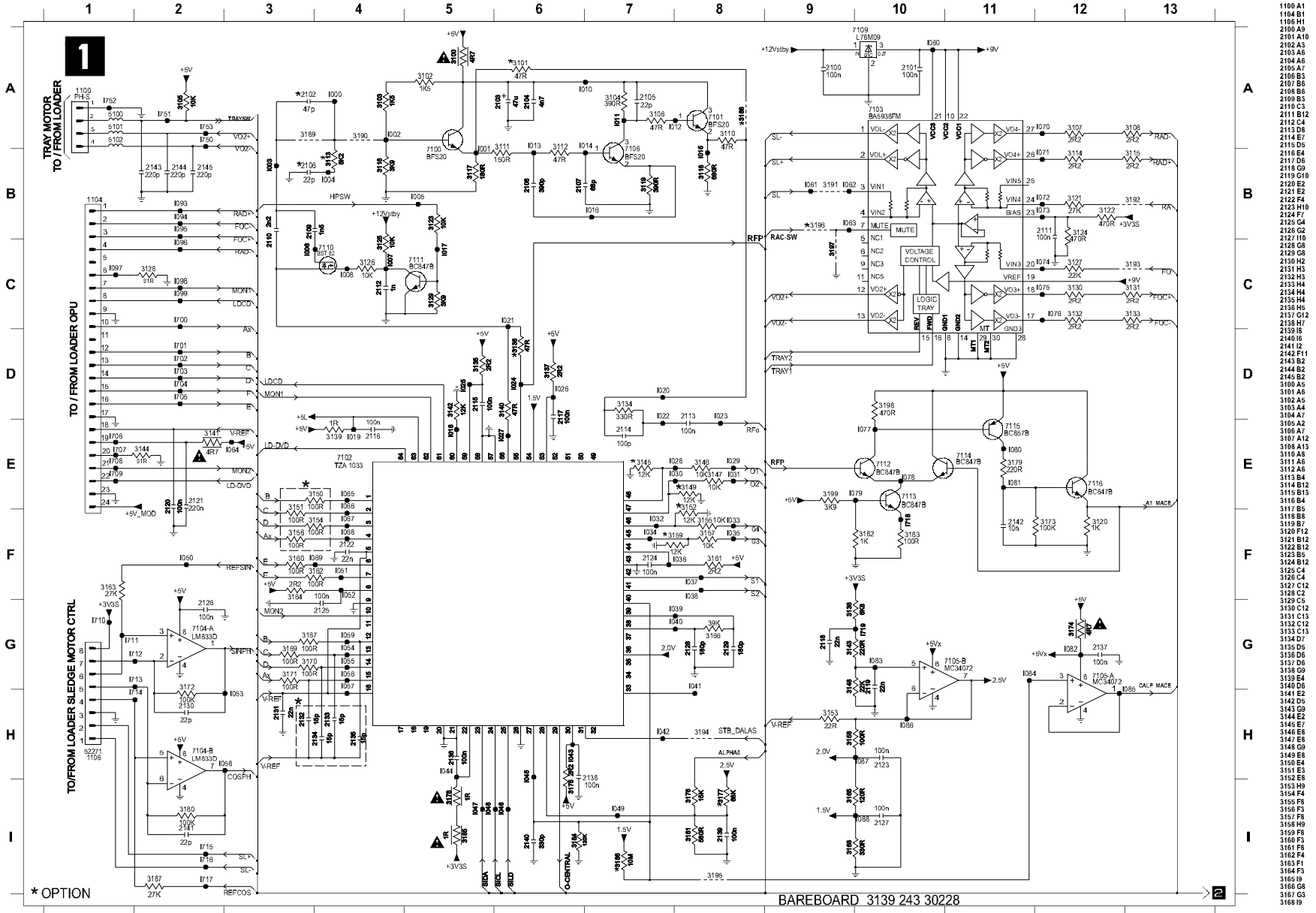
5607	4822 157 70651	12µH (NL322522T-120J)
5608	4822 157 70651	12µH (NL322522T-120J)
5609	4822 157 11717	BLM31P500SPT
5610	4822 157 11717	BLM31P500SPT
5611	4822 157 11717	BLM31P500SPT
5613	4822 157 11717	BLM31P500SPT
5614	4822 157 11717	BLM31P500SPT

6200	4822 130 11397	BAS316
6301	9322 128 69685	S1D
6302	9322 128 69685	S1D
6303	9322 128 69685	S1D
6600	9322 154 46685	DIO REC SM RB501V-40 (RHM0) R

7100	5322 130 42718	BFS20
7101	5322 130 42718	BFS20
7102	9352 637 37518	TZA1033HL
7103	4822 209 17229	BA5938FM
7104	4822 209 30095	LM833D
7105	4822 209 32073	MC34072D
7106	5322 130 42718	BFS20
7109	4822 209 15083	AN78M09
7109	9322 136 29668	L78M09CDT
7110	5322 130 60803	BST72A
7111	4822 130 60511	BC847B
7112	4822 130 60511	BC847B
7113	4822 130 60511	BC847B
7114	4822 130 60511	BC847B
7115	4822 130 60373	BC856B
7116	4822 130 60511	BC847B
7201	9351 869 80118	74HCT573DB
7202	3104 123 85860	AM29F002T/5.1.14
7203	4822 130 60373	BC856B
7207	4822 209 17231	SAA7399HL
7208	9322 139 67685	IC SM MC33464N-45A (MOTA) R
7208	9322 163 27685	IC SM NCP301LSN45 (ONSE) R
7209	4822 209 90927	L78L05ACD
7210	5322 130 60845	BC807-25
7211	4822 130 42804	BC817-25
7304	4822 209 16877	BA6856FP
7304	9322 139 85668	BA6665FM
7310	4822 209 15899	CY7C199-15C
7311	9352 622 13557	SAA7335HL
7312	4822 130 60373	BC856B
7315	4822 130 60511	BC847B
7316	9352 500 20118	IC SM 74LVC08AD (PHSE) R
7317	9352 500 20118	IC SM 74LVC08AD (PHSE) R
7407	9322 166 67668	IC SM MT48LC4M16A2TG-7E(MRN0)R
7501	4822 130 60511	BC847B
7503	9322 167 96671	IC SM STI5508AVB (ST00) Y
7503	9322 169 81671	STI5508EVB
7504	2722 171 08709	OSC XTL SM 27MHZ 120P FXO-31 R
7505	9322 156 81668	M24C32-WMN6TNKSA
7506	5322 130 63289	BSN20
7507	5322 130 63289	BSN20
7600	5322 209 71568	PC74HCT14T
7601	9322 142 88668	IC SM LF25CDT (ST00) R
7602	9322 142 88668	IC SM LF25CDT (ST00) R
7604	4822 130 60511	BC847B
7605	4822 209 17398	LD1117DT33
7607	4822 130 60511	BC847B
7608	4822 130 60373	BC856B
7609	4822 130 60373	BC856B
7610	4822 130 60511	BC847B
7611	9352 456 80115	74HCT1G125GW
7612	4822 130 60511	BC847B
7613	4822 130 60511	BC847B
7614	4822 130 60511	BC847B
7615	4822 130 60511	BC847B
7617	4822 130 60511	BC847B
7618	4822 130 60511	BC847B
7620	4822 130 60373	BC856B
7621	4822 130 42804	BC817-25
7631	4822 130 60511	BC847B
7632	4822 130 60511	BC847B

Electrical Diagrams and Print-Layouts

Monoboard



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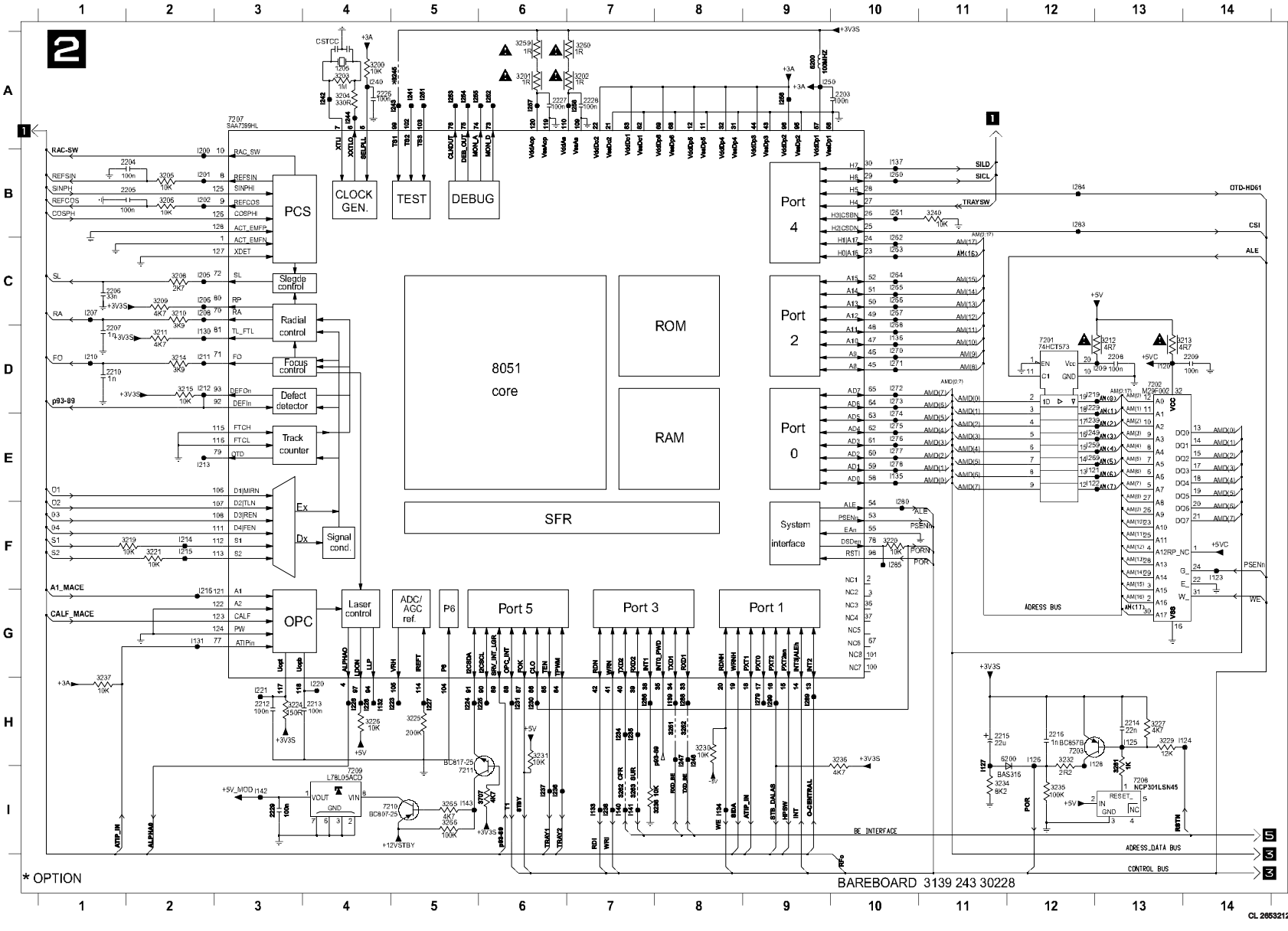
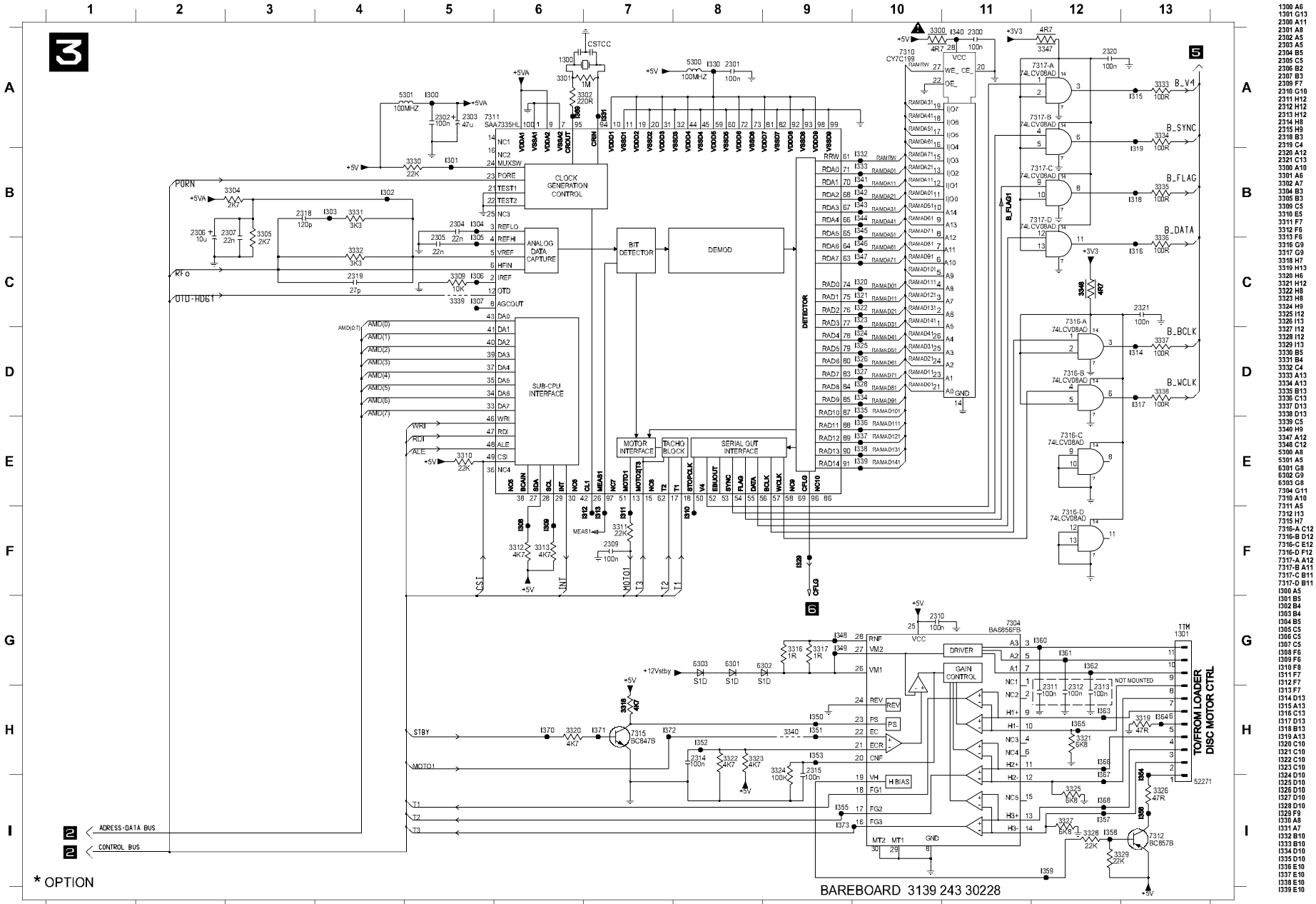


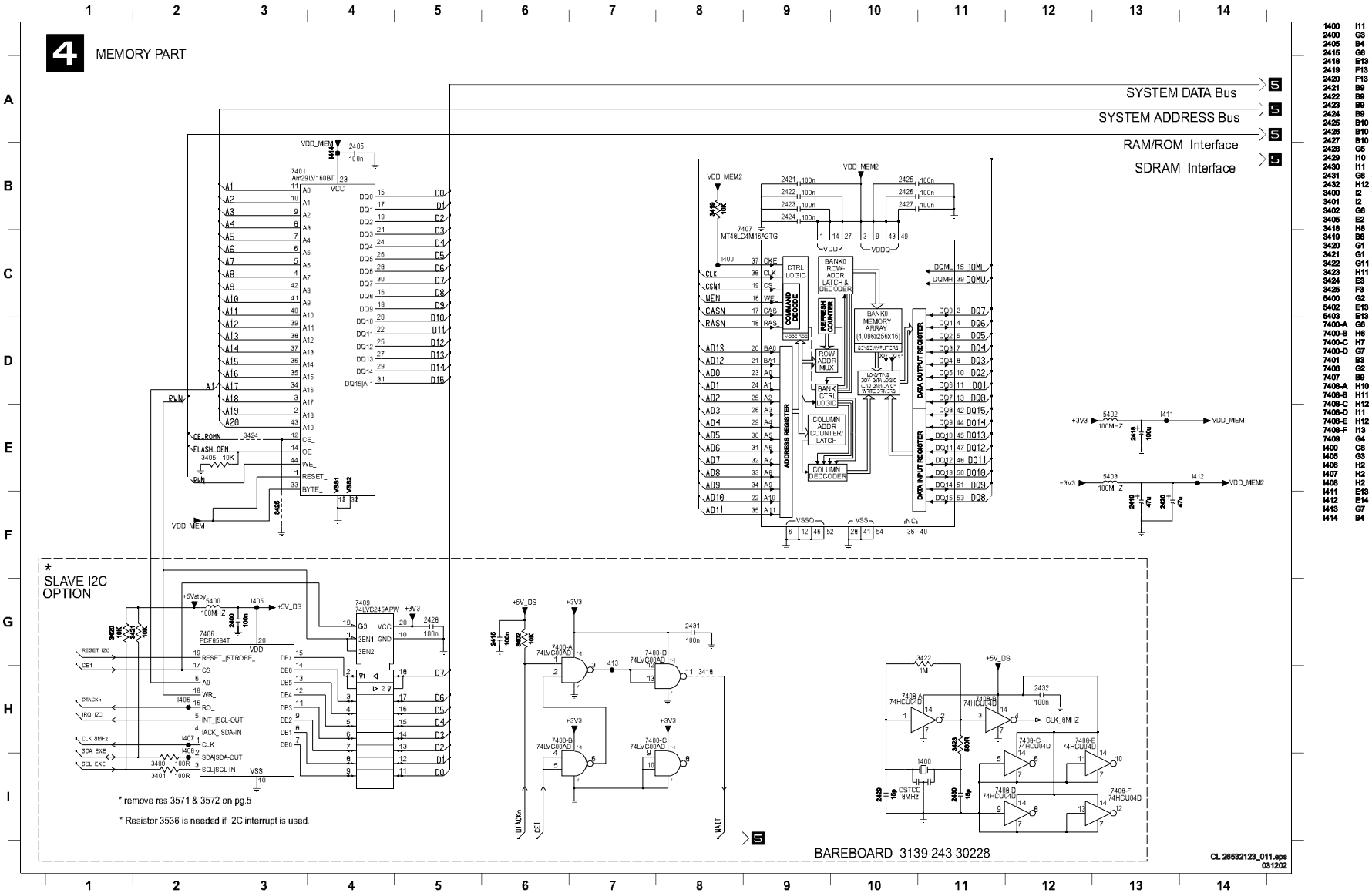
I205	A4	I207	C1
I203	A10	I208	C2
I204	B2	I209	D13
I205	B2	I210	D1
I206	C1	I211	D2
I207	D1	I212	D2
I208	D13	I213	E2
I209	D14	I214	F2
I210	D1	I215	F2
I212	H3	I216	G2
I213	H4	I219	D13
I214	H13	I220	H4
I215	H12	I221	H3
I216	H12	I223	H5
I226	A5	I224	H5
I227	A7	I225	H6
I228	A7	I226	H4
I229	I3	I227	H5
I200	A4	I228	H4
I201	A8	I229	D13
I202	A7	I230	H6
I203	A4	I231	H6
I204	A4	I234	H7
I205	B2	I235	H7
I206	B2	I236	I8
I208	C2	I237	I8
I209	C2	I238	I7
I210	C2	I239	E13
I211	D2	I240	A4
I212	D13	I241	A5
I213	D14	I242	A4
I214	D2	I243	A5
I215	D2	I244	A4
I219	F2	I247	H8
I220	F10	I248	H8
I221	F2	I249	E13
I224	H4	I250	A10
I225	H5	I251	A5
I226	H4	I252	A8
I227	H13	I253	A5
I229	H13	I254	A5
I230	H8	I255	A8
I231	H6	I256	A9
I232	H12	I257	A8
I234	I12	I258	A7
I235	I12	I259	E13
I236	H10	I260	B10
I237	H1	I261	B10
I238	I8	I262	C10
I240	B11	I263	C10
I245	A5	I264	C10
I251	H8	I265	C10
I252	H8	I266	C10
I259	A8	I267	C10
I260	A7	I268	D10
I261	H13	I269	E13
I262	I7	I270	D10
I263	I7	I271	D10
I265	I5	I272	D10
I266	I5	I273	D10
I707	I6	I274	E10
I5200	A9	I275	E10
I6200	H12	I276	E10
I7201	D12	I277	E10
I7202	D13	I278	E10
I7203	H12	I279	H9
I7207	A3	I280	F10
I7208	I13	I283	B12
I7209	I4	I284	B12
I7210	I5	I285	F10
I7211	I6	I286	H9
I120	D13	I288	H8
I121	E13	I289	H9
I122	E13	I299	H9
I123	F14		
I124	H14		
I125	H13		
I126	H12		
I127	H11		
I128	I13		
I130	D2		
I131	G2		
I132	H5		
I133	I7		
I134	I8		
I135	E10		
I136	D10		
I137	B10		
I139	I8		
I140	I7		
I141	I7		
I142	I3		
I143	I5		
I200	B2		
I201	B2		
I202	B2		
I205	C2		
I206	C2		

CL 26532123_009.eps
031202

Monoboard

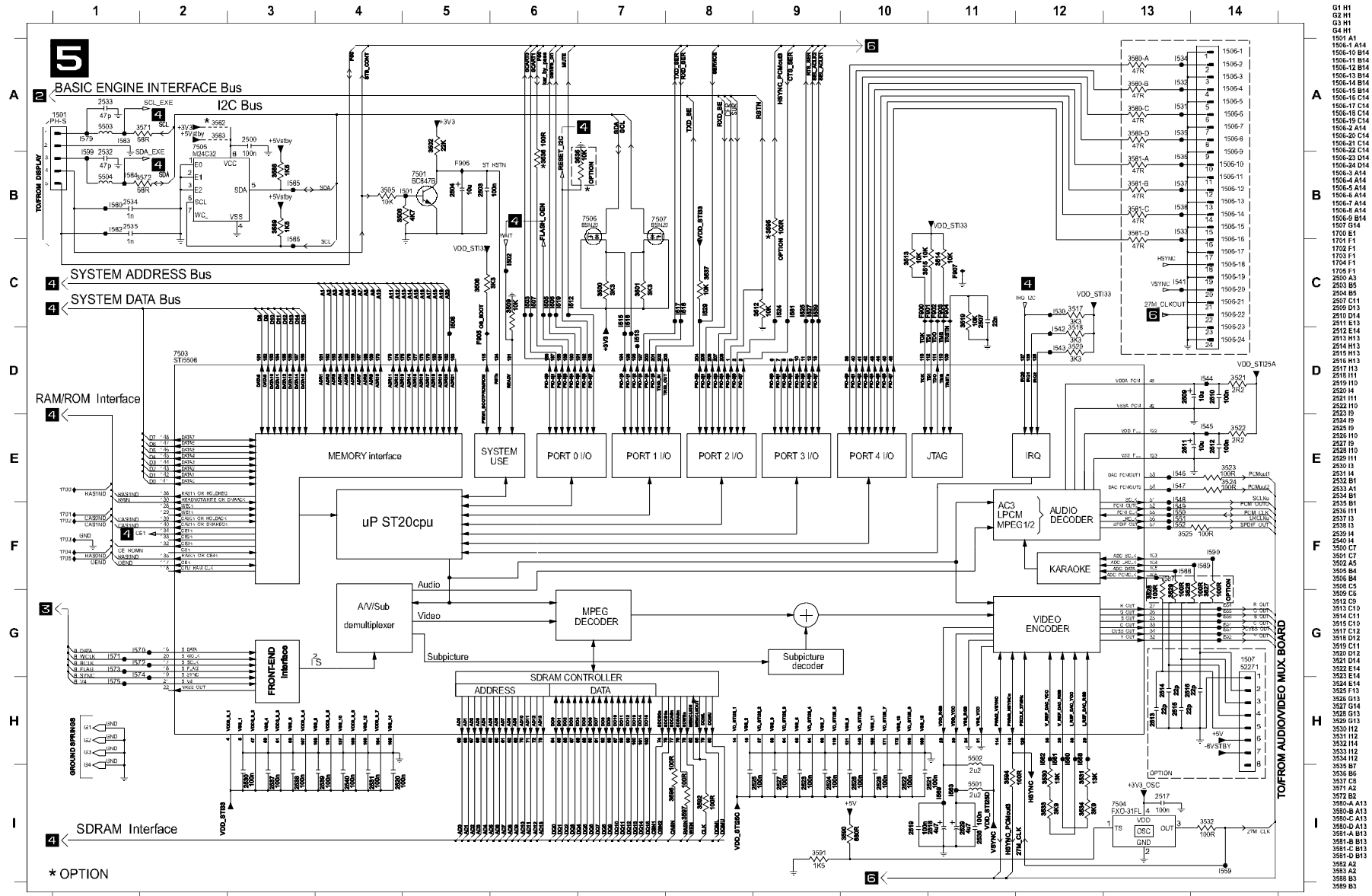

CLOCK GENERATION CONTROL
ANALOG DATA CAPTURE
BIT DETECTOR
DEMOD
SUB-CPU INTERFACE
MOTOR INTERFACE
TACHO BLOCK
SERIAL OUT INTERFACE
DETECTOR
DRIVER
GAIN CONTROL
H BIAS
VCC
GND
B_V4
B_SYNC
B_FLAG
B_DATA
B_BCLK
B_WCLK
TO/FROM LOADER DISC MOTOR CTRL
ADRESS-DATA BUS
CONTROL BUS
* OPTION
BAREBOARD 3139 243 30228
CL 26532123_010.eps 031202

Monoboard



1400 I11
2400 G3
2405 B4
2415 G6
2418 E13
2419 F13
2420 F13
2421 B9
2422 B9
2423 B9
2424 B9
2425 B10
2426 B10
2427 B10
2428 G5
2429 I10
2430 I11
2431 G6
2432 H12
3400 I2
3401 I2
3402 G6
3405 E2
3418 H6
3419 B8
3420 G1
3421 G1
3422 G11
3423 H11
3424 E3
3425 F3
5400 G2
5402 E13
5403 E13
7400-A G6
7400-B H6
7400-C H7
7400-D G7
7401 B3
7408 G2
7407 B9
7408-A H10
7408-B H11
7408-C H12
7408-D I11
7408-E H12
7408-F I13
7409 G4
I400 C8
I405 G3
I406 H2
I407 H2
I408 H2
I411 E13
I412 E14
I413 G7
I414 B4

Monoboard



Project	Loc. 7503	Remarks	Digital YUV Option	Karaoke Option	PLL_CLK chip Option	PLL Rework Issue
SD3.0	Sti5508/Cut 1.8	Replace 5505	Insert Conn 1508 & R-pk 3580/1	Insert Conn 1507, res 3526-9 & caps 2513-6	As is	Remove 3521; replace 2510 w. jumper
SD3.0	Sti5508/Cut 2.0	Replace 5505	Insert Conn 1508, R-pk 3580/1 & R3707	Insert Conn 1507, res 3526-9 & caps 2513-6	Don't Insert 7818, 5812, 3698-99, 3703, 2618 & 2846	No Rework
SD3.1	Sti5580	DTS Decoding, PCM_OUT3	Insert Conn 1508, R-pk 3580/1 & R3707	Insert Conn 1507, res 3526-9 & caps 2513-6	Don't Insert 7818, 5812, 3698-99, 3703, 2618 & 2846	No Rework
SD3.3	Sti5519	5508 minus Karaoke	Insert Conn 1508, R-pk 3580/1 & R3707	No Karaoke	Don't Insert 7818, 5812, 3698-99, 3703, 2618 & 2846	No Rework

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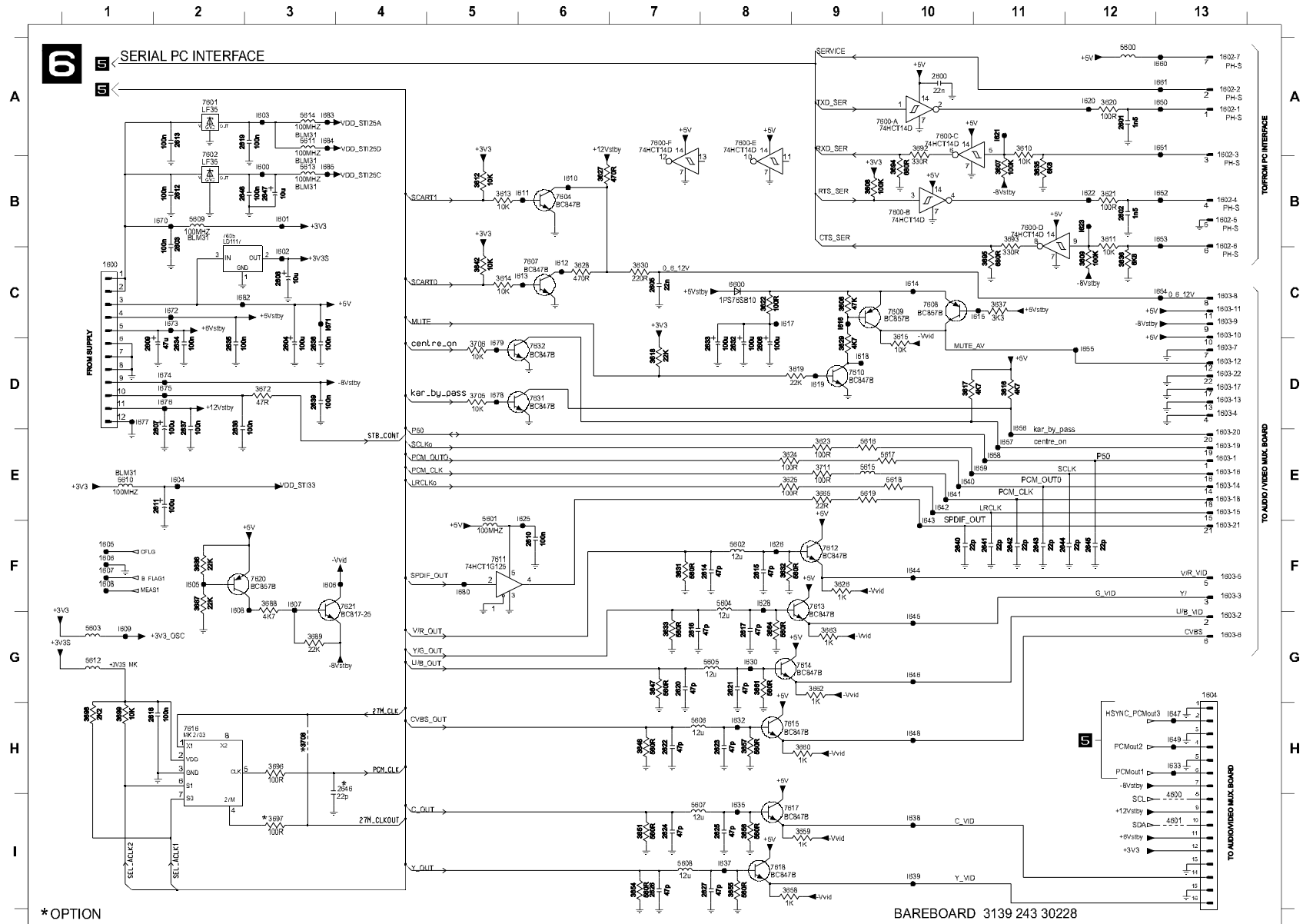
CL 26532123_012.eps
031202

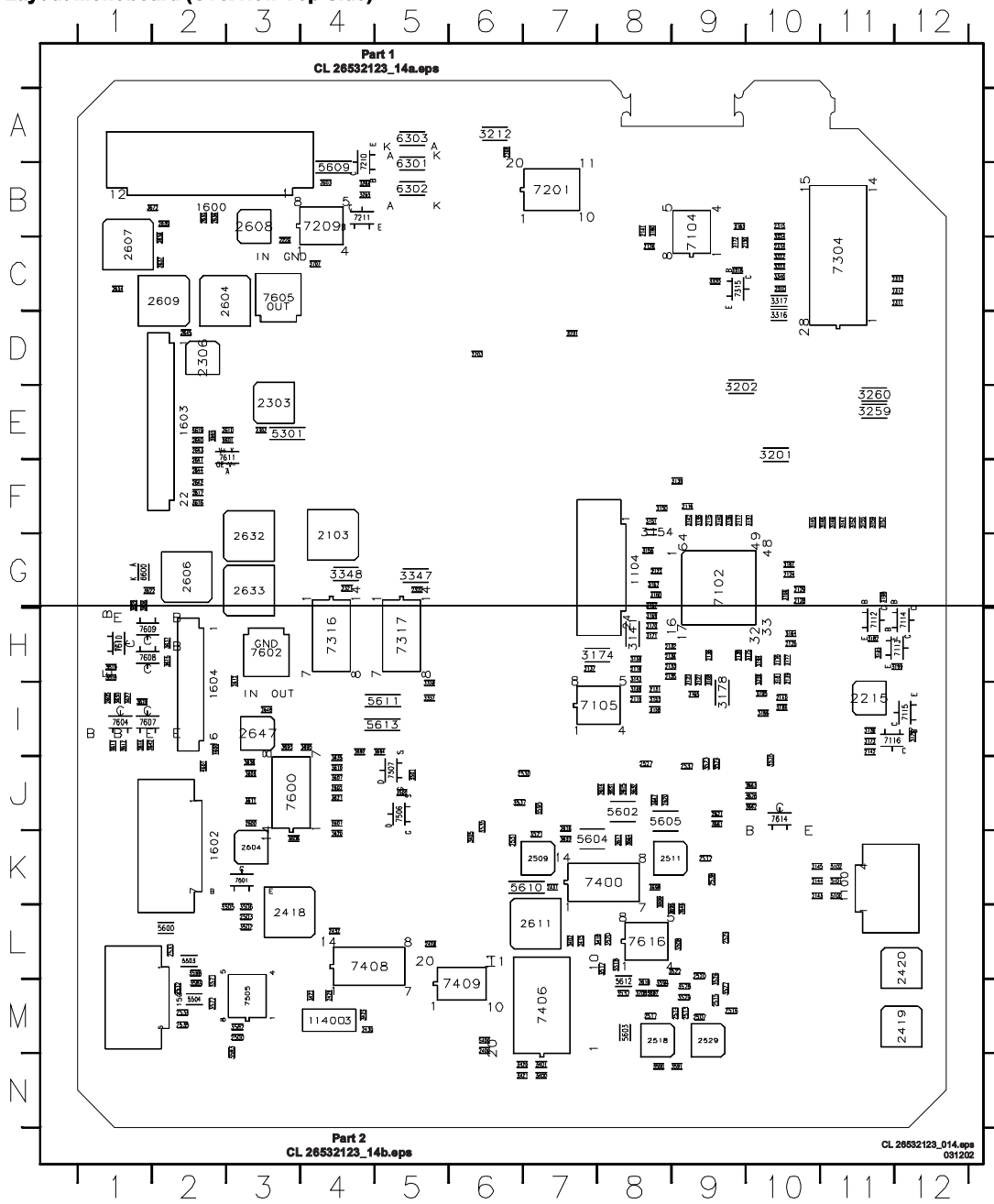
Monoboard



1600 C1	3656 I8
1602-1 A13	3657 H8
1602-2 A13	3658 I8
1602-3 B13	3659 I9
1602-4 B13	3660 H9
1602-5 B13	3661 G8
1602-6 C13	3662 G9
1602-7 A13	3663 G9
1603-1 E13	3664 G8
1603-10 C13	3665 E9
1603-11 C13	3672 D3
1603-12 D13	3686 F2
1603-13 D13	3687 F2
1603-14 E13	3688 F3
1603-15 E13	3689 G3
1603-16 E13	3692 A10
1603-17 D13	3693 B11
1603-18 E13	3694 B10
1603-19 E13	3695 C11
1603-2 G13	3696 H3
1603-20 E13	3697 I3
1603-21 F13	3698 H1
1603-22 D13	3699 H1
1603-3 F13	3705 D5
1603-4 D13	3706 D5
1603-5 F13	3708 H3
1603-6 G13	3711 E9
1603-7 D13	4600 I13
1603-8 C13	4601 I13
1603-9 C13	5600 A12
1604 G13	5601 F5
1605 F1	5602 F5
1606 F1	5603 G1
1607 F1	5604 F5
1608 F1	5605 G5
2600 A10	5606 H7
2601 A12	5607 I7
2602 B12	5608 I7
2603 B2	5609 B2
2604 D3	5610 E1
2605 C7	5611 A3
2606 D5	5612 G1
2607 D2	5613 B3
2608 C3	5614 A3
2609 D1	5615 E9
2610 F6	5616 E9
2611 E2	5617 E10
2612 B2	5618 E10
2613 A2	5619 E9
2614 F5	6600 C5
2615 F5	7600-A A9
2616 G7	7600-B B10
2617 G5	7600-C A10
2618 H1	7600-D B11
2619 A2	7600-E A5
2620 G7	7600-F A7
2621 G5	7601 A2
2622 H7	7602 B2
2623 H5	7604 B6
2624 I7	7605 B2
2625 I8	7607 C6
2626 I7	7608 C10
2627 I5	7609 C10
2632 D5	7610 D9
2633 D5	7611 F5
2634 D2	7612 F9
2635 D2	7613 F9
2636 D3	7614 G9
2637 D2	7615 H6
2638 D2	7616 H2
2639 D3	7617 I5
2640 F10	7618 I5
2641 F11	7620 F3
2642 F11	7621 F4
2643 F11	7631 D6
2644 F11	7632 D6
2645 F12	8000 B3
2646 H4	8001 B3
2647 B3	8002 C3
2648 B2	8003 A3
3686 C9	8004 E2
3687 B11	8005 F2
3688 B9	8006 F3
3689 C12	8007 F3
3610 A11	8008 G2
3611 B12	8009 G1
3612 B5	8010 B6
3613 B5	8011 B6
3614 C5	8012 C6
3615 D10	8013 C6
3616 D11	8014 C10
3617 D10	8015 C11
3618 D7	8016 C9
3619 D9	8017 C6
3620 A12	8015 D9
3621 B12	8019 D9
3622 C5	8020 A12
3623 E9	8021 A11
3624 E8	8022 B12
3625 E5	8023 B12
3626 F9	8025 F6
3627 B6	8026 F8
3628 C6	8028 F5
3629 D9	8030 G5
3630 C7	8032 H8
3631 F7	8033 H13
3632 F5	8035 I8
3633 G7	8037 I5
3635 B11	8038 I10
3636 C12	8039 I10
3637 C11	8040 E10
3642 C5	8041 E10
3647 G7	8042 E10
3648 H7	8043 F10
3651 I7	8044 F10
3654 I7	8045 G10
3655 I8	8046 G10

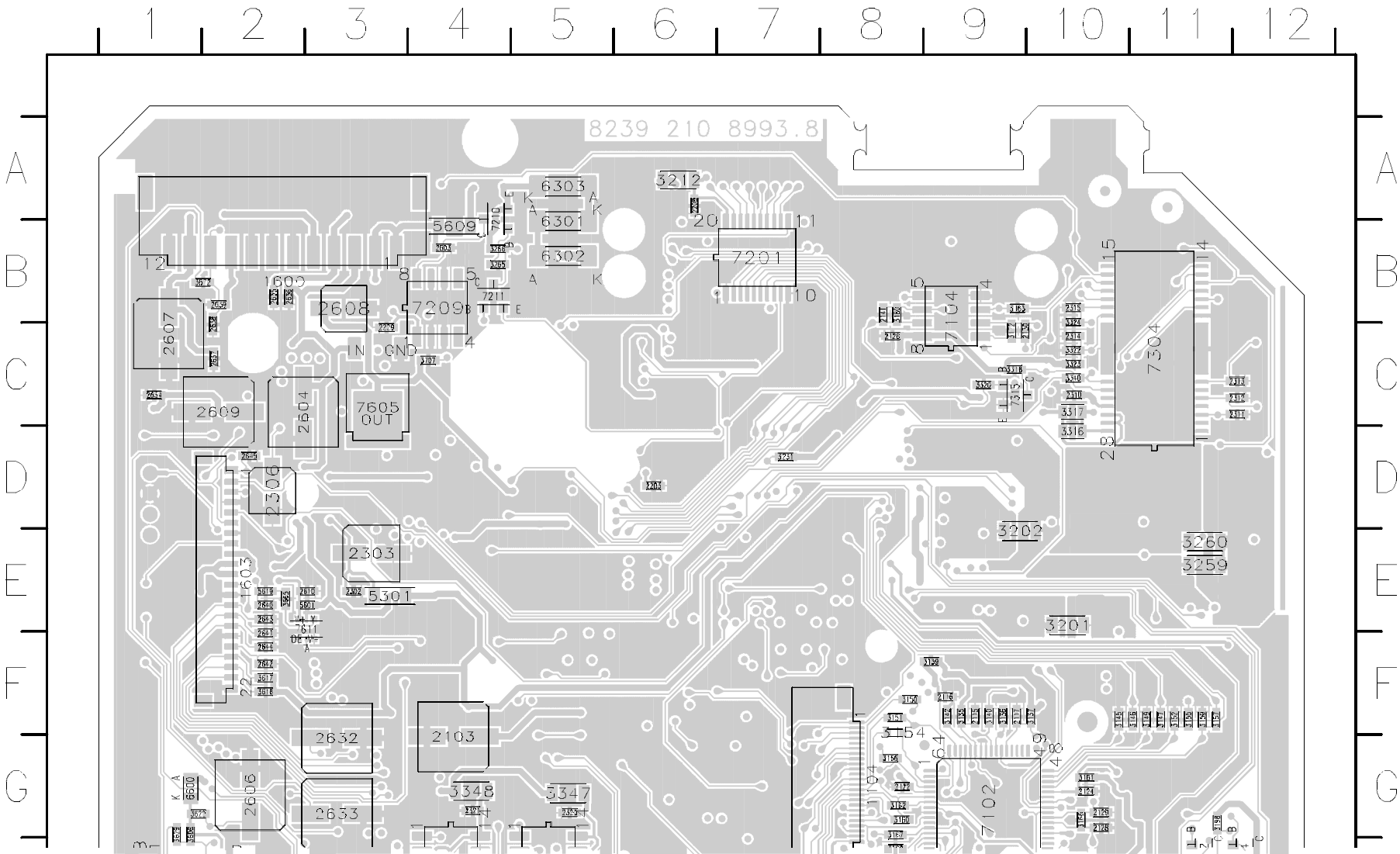
The components in the "Option A" block ie. x'tor 7630, res. 3700, 3701 are not required anymore.
It was originally used in the Gapfiller project.

Layout Monoboard (Overview Top Side)



1100	K11	2618	M8	3500	J5	7112	H11
1104	G8	2620	J8	3501	J5	7113	H12
1400	M4	2621	J9	3502	L3	7114	H12
1601	M2	2632	G3	3505	L3	7115	I12
1600	B2	2633	G3	3506	L3	7116	I11
1602	K2	2634	C1	3508	L9	7201	B7
1603	E2	2635	B2	3517	L8	7209	B4
1604	I2	2636	B2	3518	L8	7210	A4
2103	G4	2637	C2	3520	L8	7211	B4
2115	F9	2638	G2	3521	K7	7304	C11
2116	F9	2639	B2	3522	L9	7315	C9
2117	F9	2640	E2	3523	J9	7316	H4
2118	H8	2641	F2	3524	J9	7317	H5
2119	I8	2642	F2	3525	J10	7400	K8
2122	G8	2643	E2	3526	M9	7406	M7
2123	H9	2644	F2	3527	M9	7408	L4
2124	G10	2645	D2	3528	M9	7409	M6
2125	H10	2646	L9	3529	M9	7501	K3
2126	C8	2647	I3	3532	M8	7505	M3
2127	H9	2648	I3	3535	J6	7506	J5
2128	G10	3120	I11	3537	J6	7507	J5
2129	G10	3135	F9	3571	M2	7600	J3
2130	C9	3136	F9	3572	M2	7602	H3
2131	I8	3137	F10	3582	M3	7604	I1
2132	H8	3138	H8	3583	M3	7605	C3
2133	H8	3139	F9	3588	L2	7607	I1
2134	H8	3140	F9	3589	M2	7608	H1
2135	H8	3141	H8	3590	N8	7609	H1
2136	H9	3142	F9	3591	N9	7610	H1
2137	H7	3143	H8	3594	M8	7611	E3
2138	H9	3145	F10	3595	J7	7614	J10
2139	H10	3146	F11	3606	G1	7616	L8
2140	I10	3147	F11	3607	J4		
2141	B8	3148	I8	3608	K3		
2142	I11	3149	F11	3609	J3		
2143	K10	3150	F8	3610	J4		
2144	K10	3151	F8	3611	J3		
2145	K10	3152	F11	3612	I1		
2203	D8	3153	I8	3613	I1		
2208	A8	3154	F8	3614	I1		
2215	I11	3155	F11	3615	H2		
2229	C3	3156	G8	3616	F2		
2302	E3	3157	F11	3617	F2		
2303	E3	3158	I8	3618	H1		
2306	D2	3159	F11	3619	H1		
2310	C10	3160	G8	3620	K4		
2311	C12	3161	G10	3621	J4		
2312	C12	3162	G8	3622	G1		
2313	C12	3163	B9	3626	J10		
2314	C10	3164	H10	3627	I1		
2315	B10	3165	I9	3628	I1		
2320	G5	3166	G10	3629	G1		
2321	G4	3167	G8	3630	I1		
2400	M6	3168	H9	3631	J8		
2415	L7	3169	H8	3632	J8		
2418	L3	3170	H8	3633	K7		
2419	M12	3171	H8	3635	J4		
2420	L12	3172	C9	3636	J3		
2428	L5	3173	I11	3637	H2		
2429	M4	3174	H8	3642	I1		
2430	M4	3175	H10	3647	J8		
2431	K7	3176	H10	3661	J9		
2432	L4	3177	H10	3662	J10		
2500	M3	3178	I9	3663	J10		
2503	L3	3179	I12	3664	K8		
2504	K3	3180	B8	3665	E2		
2507	M9	3181	H10	3672	B2		
2509	K7	3182	H11	3692	I4		
2511	K8	3183	H11	3693	I3		
2512	K9	3184	I10	3694	I5		
2513	M9	3186	I10	3695	I4		
2514	M9	3194	H10	3696	L8		
2515	M9	3195	I10	3697	M8		
2516	M9	3198	G11	3698	K8		
2517	M8	3199	H12	3699	K8		
2518	M8	3201	E10	3707	C4		
2520	L9	3202	E9	3708	M8		
2524	L9	3212	A6	4600	I2		
2527	J8	3231	D7	4601	J2		
2529	M9	3236	H10	5100	K11		
2530	J7	3259	E11	5101	K11		
2531	K8	3260	E11	5102	K11		
2532	M2	3265	B4	5301	E3		
2533	L2	3266	B4	5400	M6		
2534	M2	3316	D10	5503	L2		
2535	M2	3317	C10	5504	M2		
2537	J9	3318	C9	5600	L2		
2538	K9	3320	C9	5601	E3		
2600	J3	3322	C10	5602	J8		
2601	J4	3323	C10	5603	M8		
2602	J4	3324	B10	5604	K7		
2603	B4	3337	I5	5605	J8		
2604	C2	3338	I5	5609	B4		
2605	I1	3340	C10	5610	K7		
2606	G2	3347	G5	5611	I5		
2607	C1	3348	G4	5612	M8		
2608	B3	3400	N7	5613	I5		
2609	C2	3401	N7	5619	E2		
2610	E3	3402	L7	6301	B5		
2611	L7	3405	K8	6302	B5		
2612	H3	3418	L8	6303	A5		
2614	J8	3420	N6	6600	G1		
2615	J8	3421	N6	7102	G9		
2616	J7	3422	M4	7104	B9		
2617	K8	3423	M4	7105	I8		

Layout Monoboard (Part 1 Top Side)



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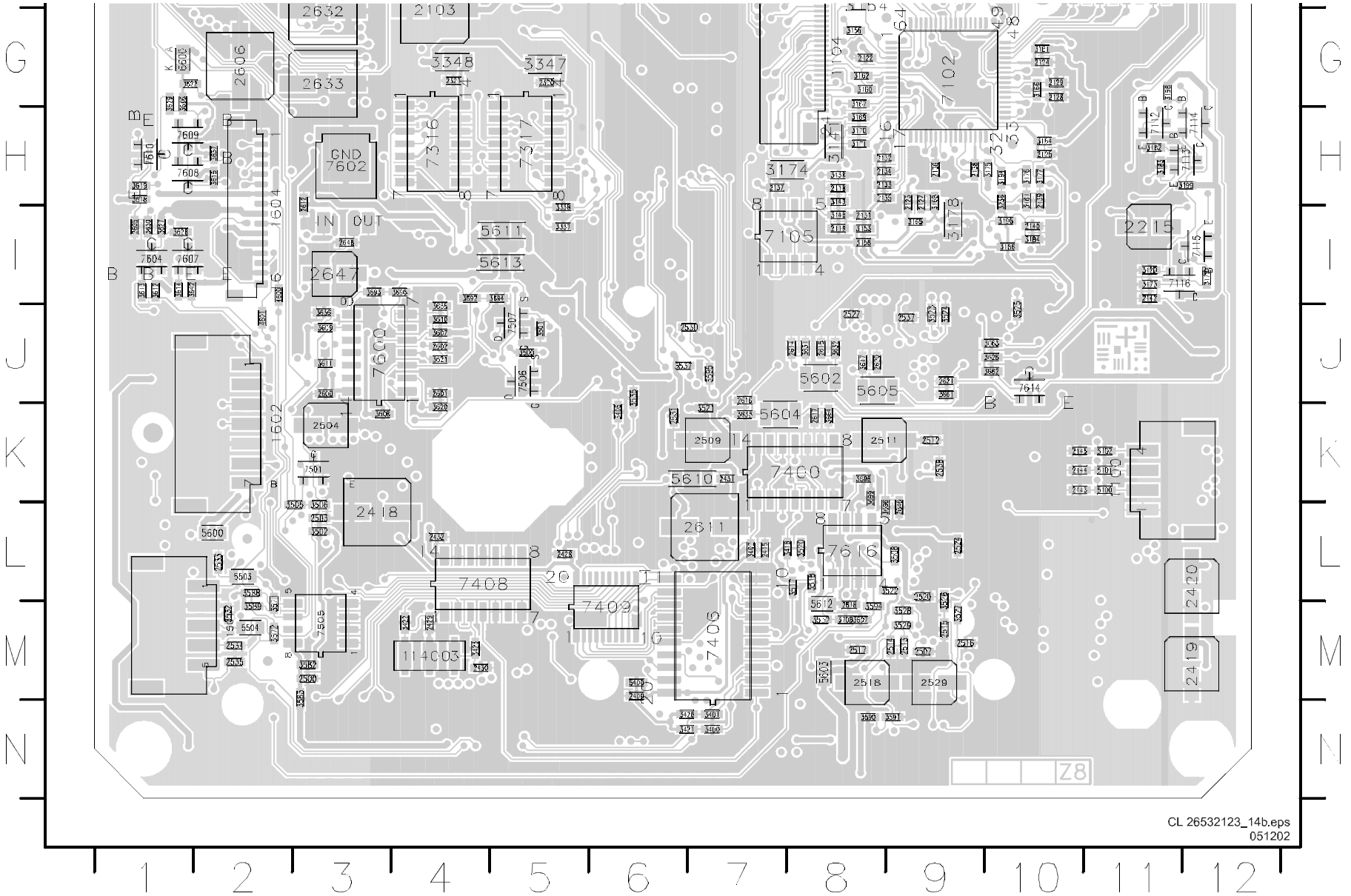
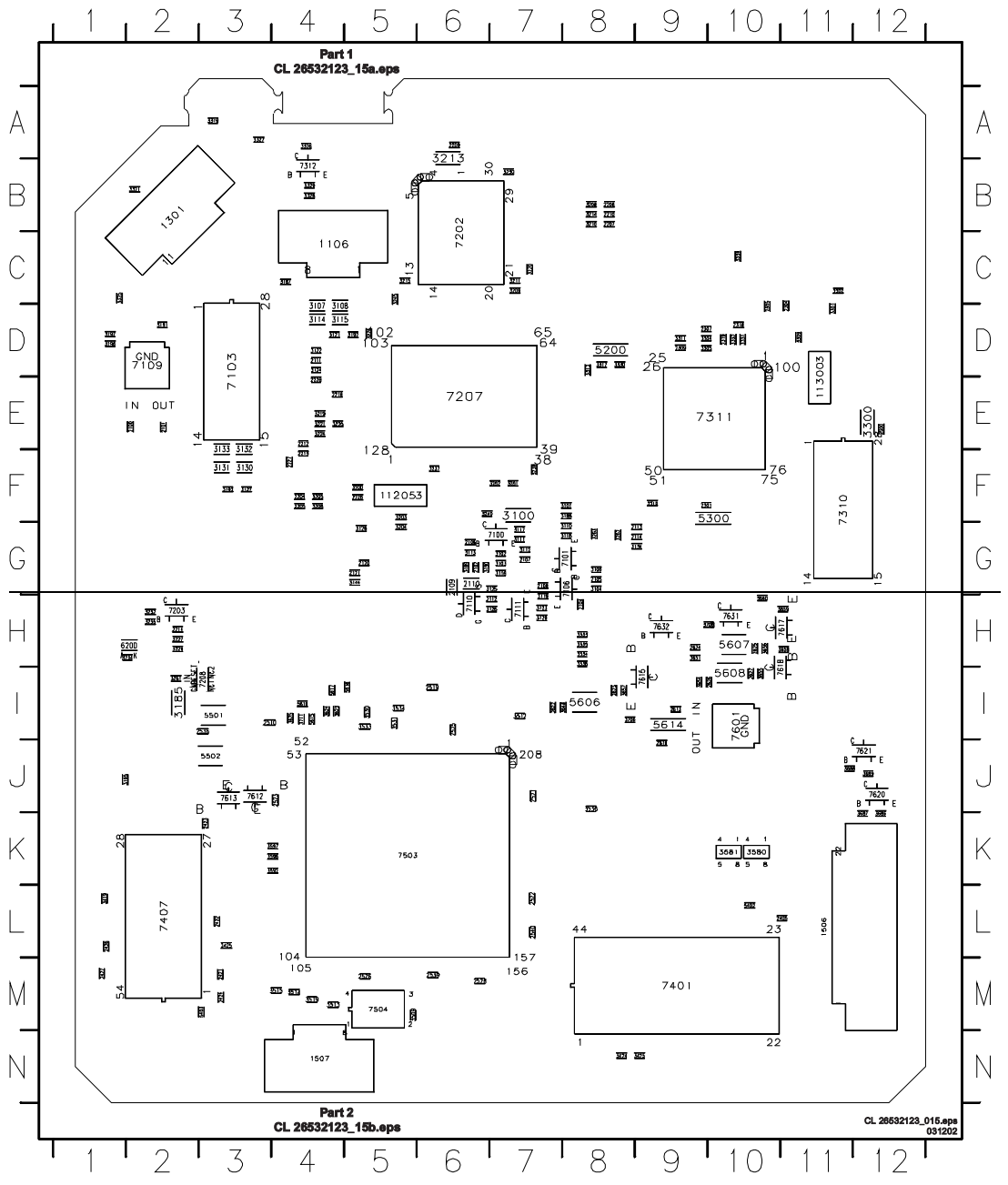
Layout Monoboard (Part 2 Top Side)



Layout Monoboard (Overview Bottom Side)



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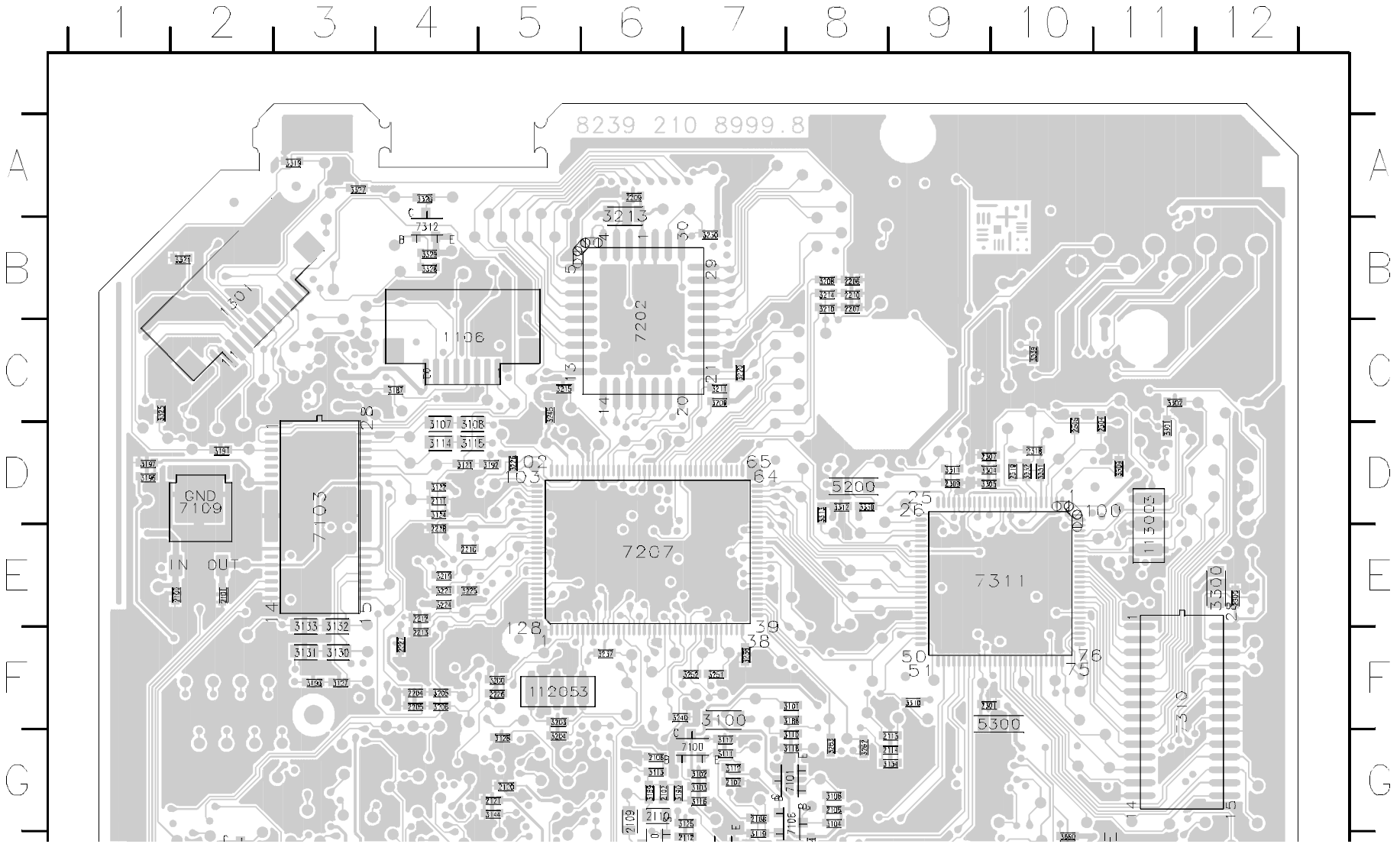
1205	F5	3134	G9	3686	K12
1300	E11	3144	G5	3687	K12
1301	B2	3185	I2	3688	J11
1506	L11	3187	C4	3689	J12
1507	N4	3188	F8	3705	H10
2100	E2	3189	G6	3706	I8
2101	E2	3190	G8	3711	I4
2102	G8	3191	D2	5200	D8
2104	H8	3192	D5	5300	F10
2105	G8	3193	F3	5402	L10
2106	G6	3196	D1	5403	M3
2107	G7	3197	D1	5501	I3
2108	G7	3200	F5	5502	J3
2109	G8	3203	F5	5606	I8
2110	G8	3204	G5	5607	H10
2111	D4	3205	F4	5608	I10
2112	H7	3206	F4	5614	I9
2113	G9	3208	B8	5615	I4
2114	G9	3209	C7	5616	I5
2120	G5	3210	B8	5617	I4
2121	G5	3211	C7	5618	I4
2204	F4	3213	A8	6200	H2
2205	F4	3214	B8	7100	G7
2206	B8	3215	C5	7101	G8
2207	B8	3219	E4	7103	D3
2209	A8	3220	C7	7106	G8
2210	B8	3221	E4	7109	D2
2212	E4	3224	E4	7110	H8
2213	F4	3225	E4	7111	H7
2214	H2	3226	D5	7202	C6
2216	E4	3227	H2	7203	H2
2226	F5	3229	H2	7207	E6
2227	F4	3230	B7	7208	I3
2228	E4	3232	H2	7310	F11
2300	E12	3234	H2	7311	E10
2301	F9	3235	H2	7312	B4
2304	D11	3237	F8	7401	M9
2305	D10	3238	F7	7407	L2
2307	D9	3240	F8	7503	K5
2308	D9	3245	C5	7504	M5
2318	D10	3251	F7	7601	I10
2319	D10	3252	F7	7612	J3
2405	L11	3261	I2	7613	J3
2421	M3	3262	G8	7615	I9
2422	L3	3263	G8	7617	H11
2423	K3	3300	E12	7618	I11
2424	M3	3301	D11	7620	J12
2425	L3	3302	C11	7621	J12
2426	L1	3304	D9	7631	H10
2427	M1	3305	D9	7632	H9
2510	I3	3309	D11		
2519	I8	3310	F9		
2521	J7	3311	D9		
2522	L7	3312	D8		
2523	J4	3313	D8		
2525	I6	3319	A3		
2526	M5	3321	B2		
2528	M6	3325	C1		
2536	I3	3326	A4		
2539	M6	3327	A3		
2540	L7	3328	B4		
2613	I9	3329	B4		
2619	J9	3330	D8		
2622	I7	3331	D10		
2623	I8	3332	D10		
2624	H9	3333	H8		
2625	H10	3334	H8		
2626	I10	3335	H8		
2627	I10	3336	H8		
3100	F7	3339	C10		
3101	F8	3419	L1		
3102	G7	3424	N8		
3103	G7	3425	N9		
3104	G8	3509	M5		
3105	J1	3512	I7		
3106	G8	3513	M4		
3107	D4	3514	M4		
3108	D4	3515	M4		
3110	G8	3519	M4		
3111	G7	3530	I5		
3112	G7	3531	I5		
3113	G6	3533	I5		
3114	D4	3534	I5		
3115	D4	3538	J8		
3116	G7	3580	K10		
3117	G7	3581	K10		
3118	G8	3592	K4		
3119	H7	3596	K4		
3121	D4	3597	K4		
3122	D4	3623	I4		
3123	H7	3624	I4		
3124	D4	3625	I4		
3125	G7	3648	I8		
3126	H7	3651	H9		
3127	F3	3654	I9		
3128	G5	3655	I10		
3129	H7	3656	H10		
3130	F3	3657	I8		
3131	F3	3658	H11		
3132	E3	3659	H11		

Layout Monoboard (Part 1 Bottom Side)



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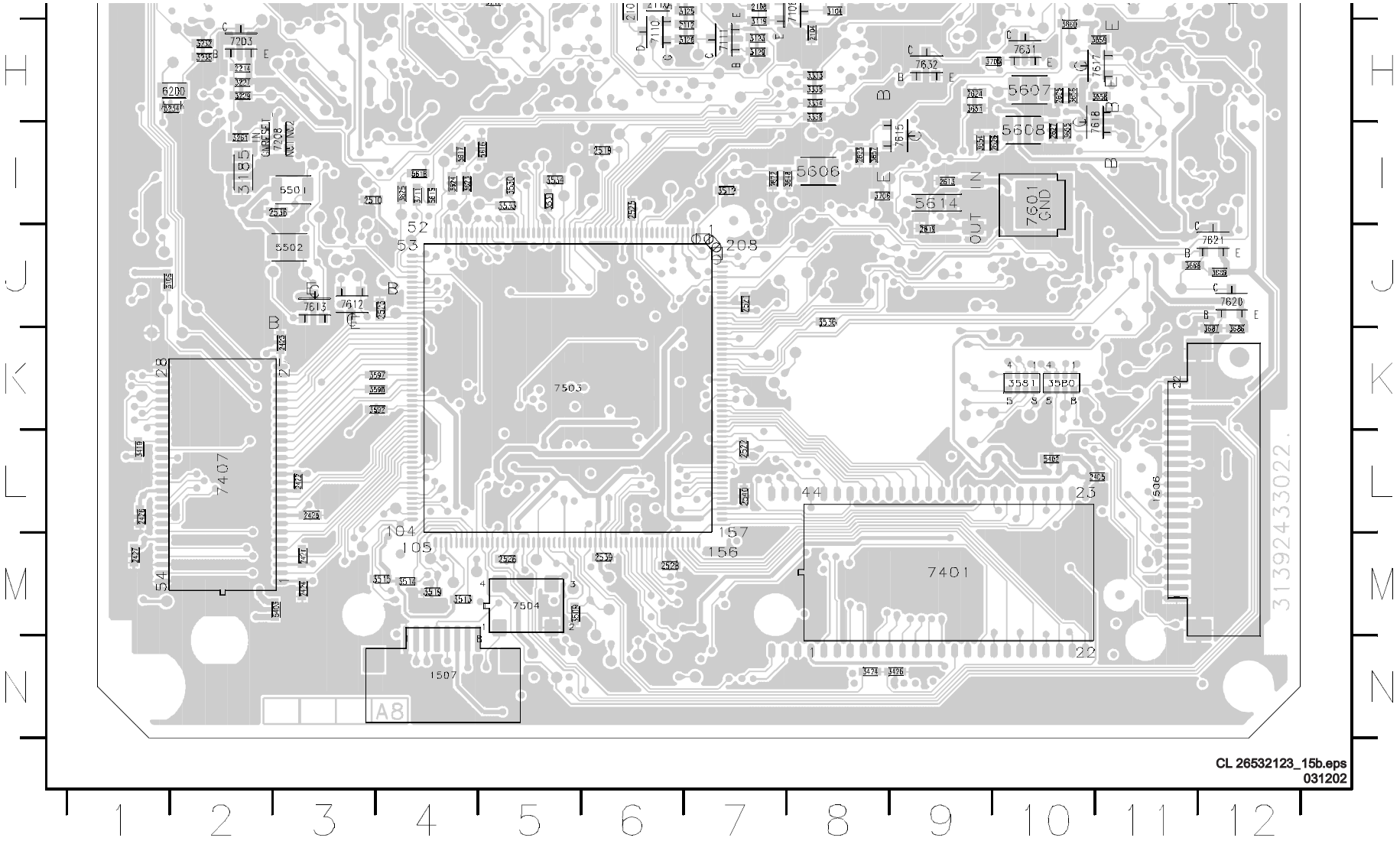
Layout Monoboard (Part 2 Bottom Side)



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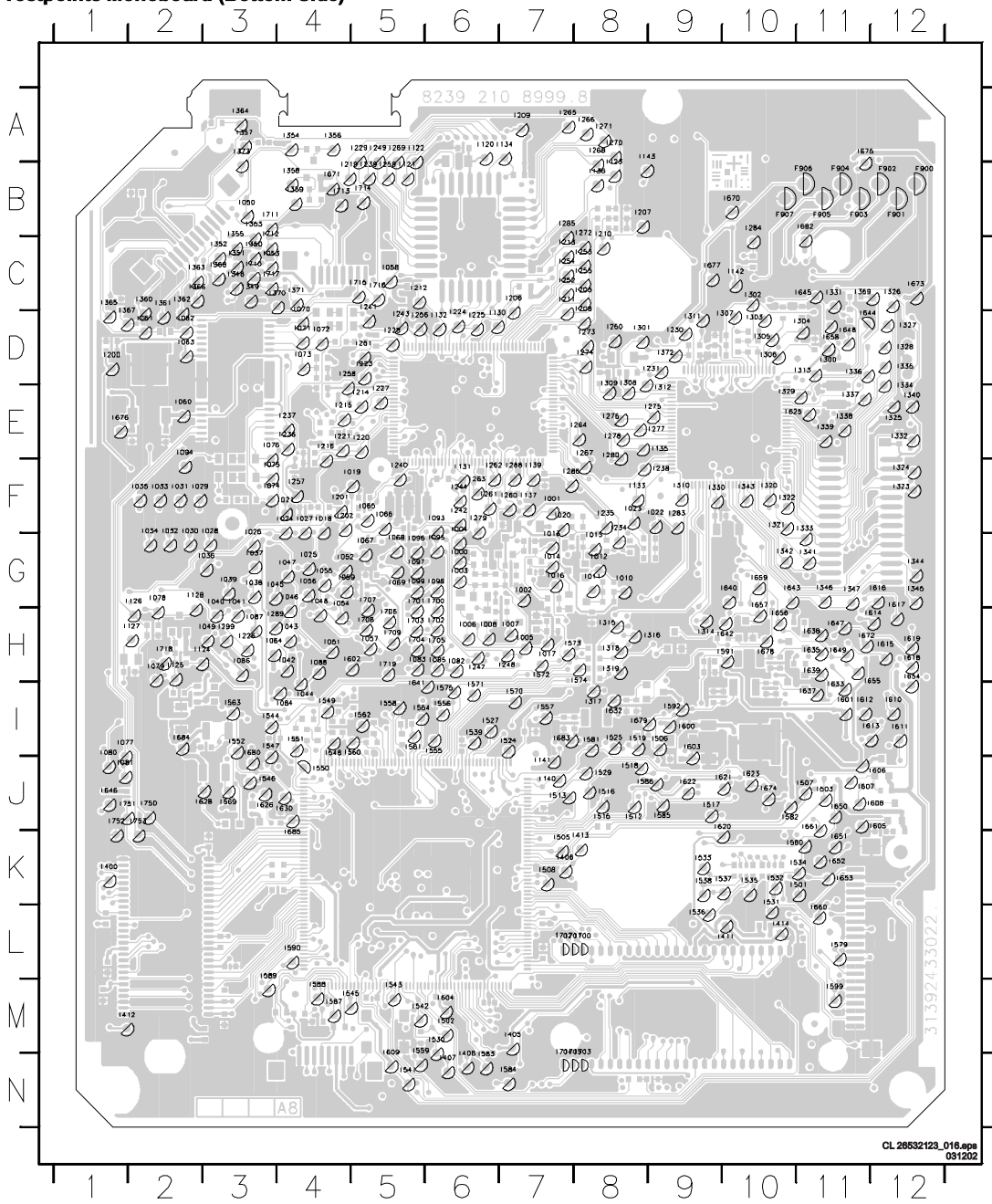
Testpoints Monoboard (Bottom Side)



1605	D12	I085	H6	I278	E8	I515	J8	I645	C11
1606	D12	I086	H3	I279	F6	I516	J8	I646	J1
1607	D12	I087	H3	I280	E8	I517	J9	I647	H11
1608	E12	I088	H4	I283	F9	I518	J8	I648	D11
1700	L8	I093	F6	I284	C10	I519	I8	I649	H11
1701	L7	I094	F2	I285	C7	I524	I7	I650	J11
1702	L7	I095	G6	I286	F7	I525	I8	I651	K11
1703	N8	I096	G5	I288	F7	I527	I6	I652	K11
1704	N7	I097	G5	I289	H3	I529	J8	I653	K11
1705	N7	I098	G6	I299	H3	I530	N6	I654	I12
F900	B12	I099	G5	I300	D11	I531	L10	I655	H11
F901	B12	I120	A8	I301	D8	I532	K10	I656	H10
F902	B12	I121	B5	I302	C10	I533	K9	I657	H10
F903	B11	I122	A5	I303	D10	I534	K11	I658	D11
F904	B11	I123	B8	I304	D11	I535	K10	I659	G10
F905	B11	I124	H2	I305	D10	I536	L9	I660	L11
F906	B11	I125	H2	I306	D10	I537	K10	I661	J11
F907	B10	I126	H2	I307	D10	I538	K9	I670	B10
I001	F7	I127	H2	I308	E8	I539	I8	I671	B4
I002	G7	I128	H2	I309	E8	I541	N5	I672	H11
I003	G6	I130	D6	I310	F9	I542	M5	I673	C12
I004	G6	I131	F6	I311	D9	I543	M5	I674	J10
I005	H7	I132	D6	I312	D8	I544	I3	I675	B11
I006	H6	I133	F8	I313	D11	I545	M4	I676	E1
I007	H7	I134	A7	I314	H9	I546	J3	I677	C9
I008	H6	I135	E8	I315	H8	I547	J3	I678	H10
I009	G6	I136	B8	I316	H8	I548	I4	I679	I9
I010	G8	I137	F7	I317	I8	I549	I4	I680	J3
I011	G8	I139	F7	I318	H8	I550	J4	I682	C11
I012	G8	I140	J7	I319	H8	I551	I4	I683	I7
I013	G7	I141	J7	I320	F10	I552	I3	I684	I2
I014	G7	I142	C10	I321	F10	I554	I5	I685	J4
I015	G8	I143	B8	I322	F10	I555	I6	I700	H6
I016	G7	I200	D1	I323	F12	I556	I6	I701	H5
I017	H7	I201	F4	I324	F12	I557	I7	I702	H6
I018	F4	I202	F4	I325	E12	I558	I5	I703	H5
I019	F5	I205	C8	I326	C12	I559	N5	I704	H5
I020	F7	I206	D7	I327	D12	I560	I5	I705	H6
I021	F4	I207	B8	I328	D12	I561	I5	I706	H5
I022	F9	I208	D8	I329	E11	I562	I5	I707	H5
I023	F8	I209	A7	I330	F9	I563	I3	I708	H5
I024	F4	I210	C8	I331	C11	I569	J3	I709	H5
I025	G4	I211	D7	I332	E12	I570	I7	I710	C3
I026	G3	I212	C5	I333	G11	I571	I6	I711	B3
I027	F4	I213	C7	I334	E12	I572	H7	I712	C3
I028	G3	I214	E5	I335	D12	I573	H7	I713	B4
I029	F2	I215	E4	I336	D11	I574	H8	I714	B5
I030	G2	I216	F4	I337	E11	I575	I6	I715	C5
I031	F2	I219	B4	I338	E11	I579	L11	I716	C5
I032	G2	I220	E5	I339	E11	I580	K11	I717	C3
I033	F2	I221	E4	I340	E12	I581	I8	I718	H2
I034	G2	I223	D5	I341	G11	I582	J10	I719	H5
I035	F2	I224	D8	I342	G10	I583	N6	I750	J2
I036	G3	I225	D6	I343	F10	I584	N7	I751	J1
I037	G3	I226	H3	I344	G12	I585	J9	I752	K1
I038	G3	I227	E5	I345	G12	I586	J9	I753	K2
I039	G3	I228	D5	I346	G11	I587	M4		
I040	H3	I229	A5	I347	G11	I588	M4		
I041	H3	I230	D9	I348	C3	I589	M3		
I042	H4	I231	D9	I349	C3	I590	L4		
I043	H4	I234	G8	I350	C3	I591	H10		
I044	I4	I235	F8	I351	C3	I592	I9		
I045	G3	I236	E4	I352	C3	I599	M11		
I046	H4	I237	E4	I353	C3	I600	I9		
I047	G4	I238	F8	I354	A4	I601	I11		
I048	H4	I239	B5	I355	C3	I602	H5		
I049	H3	I240	F5	I356	A4	I603	J9		
I050	B3	I241	D5	I357	A3	I604	M8		
I051	H4	I242	F6	I358	B4	I605	J11		
I052	G4	I243	D5	I359	B4	I606	J11		
I053	C3	I244	F6	I360	D2	I607	J11		
I054	H4	I247	H6	I361	D2	I608	J11		
I055	G4	I248	H7	I362	D2	I609	N5		
I056	G4	I249	A5	I363	C2	I610	I12		
I057	H5	I250	D8	I364	A3	I611	I12		
I058	C5	I251	D5	I365	D1	I612	I11		
I059	G4	I252	C7	I366	C2	I613	I12		
I060	E2	I253	C8	I367	D1	I614	H12		
I061	D2	I254	C7	I368	C3	I615	H12		
I062	D2	I255	C8	I369	C12	I616	G12		
I063	D2	I256	D5	I370	C4	I617	H12		
I064	H3	I257	F4	I371	C4	I618	H12		
I065	F5	I258	E4	I372	D9	I619	H12		
I066	F5	I259	B5	I373	B3	I620	K10		
I067	G5	I260	F7	I400	K1	I621	J10		
I068	G5	I261	F6	I405	M7	I622	J9		
I069	G5	I262	F6	I406	K7	I623	J10		
I070	D4	I263	F6	I407	N6	I625	E11		
I071	D4	I264	E8	I408	N6	I626	J3		
I072	D4	I265	A7	I411	L10	I628	J3		
I073	D4	I266	A8	I412	M1	I630	J4		
I074	F3	I267	F8	I413	K8	I632	I8		
I075	F3	I268	B8	I414	L10	I633	I11		
I076	E3	I269	A5	I501	K11	I635	H11		
I077	J1	I270	A8	I502	M6	I637	I11		
I078	H2	I271	A8	I503	J11	I638	H11		
I079	H2	I272	C8	I505	K7	I639	H11		
I080	J1	I273	D8	I506	I9	I640	G10		
I081	J1	I274	D8	I507	J11	I641	I6		
I082	H6	I275	E9	I508	K7	I642	H10		
I083	H5	I276	E8	I512	J8	I643	G10		
I084	I4	I277	E8	I513	J7	I644	D11		